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THE HISTORY OF THE
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HENRY THE SEVENTH
OF ENGLAND
BY
JAMES HALLAM
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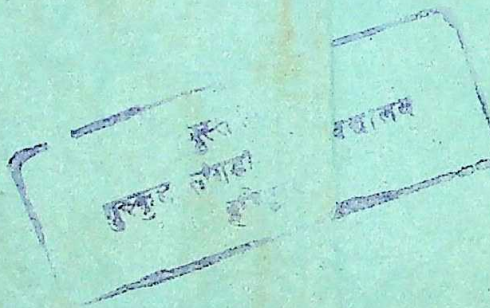
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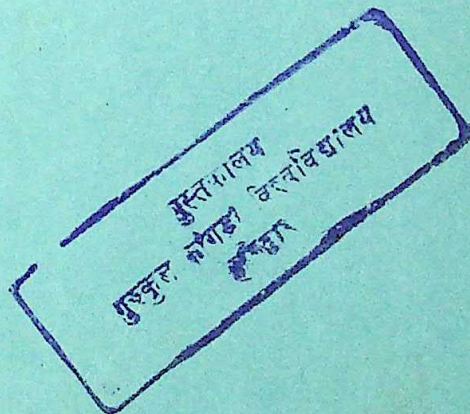
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THE JOURNAL OF AYURVEDA

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Medical Swaraj for India

BY

DR. M. R. SAMEY, Ph.D., M.D., D.P.H.

*Lecture Delivered under the Auspices of Sri Nikhila Karnataka
Ayurveda Mandala, Bangalore, December, 1931.*

The intellectual badge of helotry that India wears on its forehead is patent in every Department of national life, social, economic, educational and political and nowhere is it more undisguised than it is in Medical Relief.

The entire department of Medical Relief is conceived, planned and executed in an entirely alien pattern and the very warp and woof of it is resonant with exotic tinge.

The personnel of the Department live, move and have their being in a foreign atmosphere and their entire equipment is alien, as if India were a clean slate with no civilisation or tradition to base its policy upon. Western medicine bids a blustering extinction to Ayurveda, the medical system of the land for all lands.

The extent to which this Pretender to Medical Throne is threatening the weal of Ayurveda in India is patent by the following Memorandum of the Madras Ayurveda Sabha of Mylapore, submitted to the Government of Madras.

The Memorandum states among other things, that the public expected from the Madras School of Indian Medicine great scholars and experts in Medicine with recognition and glory. But the work produced in the school during the period of six years that it had been

in existence had produced results which were not satisfactory or upto the expectation. The great works on the subject of Ayurveda were not at all taught as intensively as the subjects demanded. Further, the value of the little knowledge of Ayurveda which the pupils got was lost like a drop in the sea of foreign studies and methods of treatment with which the students were compelled to become familiar. In the enquiry held and evidence collected preliminary to the starting of the school, it was pointed out that the Indigenous systems required Government help to revive it, that the system was complete within itself in every branch, though surgery practised in the Allopathic system and also sketched in the ancient work "Susruta" had ceased to be practised on a large scale and the public were eager to see the revival and practice of Ayurveda in its entirety. This great object had been set at naught by those in charge of the School. The Sabha feels in its duty to urge on the attention of the Government the need to protect the orthodox learning and practice and to that end (1) to entrust the Government Institution to a body of thoroughly orthodox persuasion and to make it possible for the interested to study the system for its own sake, (2) to make grants and pensions to genuine scholars, (3) and to enable them to expound the ancient science in a style attractive even to the modern world without outside interference, etc.

From the above, it is patently clear that the touch of Government to the gold of Ayurveda has resulted in its being transmuted into an alloy of copper in the Government of Madras School of Indian Medicine as a Catholic Church would slowly distort and perish under a Protestant Prelate.

So long as the Indian Nation relies on powers without for its intellectual emancipation from alien bondage, its national renaissance shall be frustrated and thwarted to the same extent as it continues to look to Government

help. Cribbed, cabinned and confined within the four corners of the official system and believing that it carries the world wisdom in medicine within its ring fence, the medical Satrapy of Government could do very little for the revival of Ayurveda.

Untouched by the hand of Government, Ayurveda remained pure at the source and its fresh waters getting mixed with the saline waters of the wide ocean of Western medical wisdom threatens to become saltish.

The army of Charaka and Susruta cannot be marshalled by civil captains of medico-legal acumen whose gallantry consists in making out a case for the subsistence of the army as Followers and lower subordinates, rank and file. The Army of Occupation is strongly entrenched and buttressed in the country for any easy rendition of the dethroned Prince of Ayurveda in the Medical "GADI." Stalwarts like Mahatma Gandhi decline to bell the cat of medical Self-determination in India and fight shy of even giving a word of encouragement to founding of an Indian Hospital in London although of official persuasion only. Much less could they dare espouse the cause of Ayurveda for fear they will be denounced as back-numbers. The great political Pundit Malaviya changed the name of Ayurveda so as to suit his scientific attainments into Faculty of Indian Medicine and Surgery in his Benares Hindu University and believes in Metallurgy to transmute India in Bondage to a free India rather than on Ayurveda. The great Vice-chancellor of the Mysore University, Dr. Brajendranath Seal, feared institution of an Ayurvedic Faculty in Mysore that it may be out-casted by the high academic Priests of Modern Universities by including such an olla-podrida of Science as Ayurveda.

While such a taboo attaches to the very name of Ayurveda given to India as a National Heritage by Lord Dhanvantri what lot or part could Aurvedists have in the medical relief of the country !

The Indian Medical Council Bill is on the Legislative tapis threatening to bang, bolt and bar the door of entry against the L. M. P. of their own make and the Change-lings of L. I. M. will be thrown as the flotsam and jetsam of an age of orthodox quakery, being neither felsh, fish or fowl in Indian Medical Hierarchy.

For the Ayurvedic colleges to assay to keep company with the advances in modern medical knowledge is to bid for lunacy. Hear what doctor Charles Mayo asserted at a recent meeting in connection with the congress of the American College of Surgeons :—

"The world had moved ahead so fast as regards material civilisation that man was tending to fall behind in his power of adpatation and the result was a great increase in insanity. Every other Hospital bed in the United States is for the mentally afflicted, insane, idiotic, feeble-minded or senile persons. That is worry. It is worry that breaks down the brain, not work as such. There is an enormous number of people who are almost fit for the asylum".

Such is the verdict of the most affluent nation of the world, the U.S.A., and how could poor India cope with it?

With spare grants, and step-motherly toleration by the powers that be, our rich Heritage of Lord Dhanwantri can ill-afford to run the Marathon Race to adapt itself to the material advancement of Western Medical Science and what does it matter if we call a halt to the mad race.

We must develop ourselves on our own lines according to the national genius and not become an appendage to any alien system. For, after all Ayurveda is the parent-stock from which other medical systems of the world have sprung and it is whole and comprehensive to suit the needs of our country.

We cannot be self-sufficient and efficient in Western medicine depending as it does on alien men and money, drugs and dopes, modes add methods for its very up-keep and more so for its advancement.

India needs cheap doctoring and no expensive equipment and achievement for the medical relief. The centralised form of medical relief shall never filter down to the masses and penury and woe shall stalk the country if a few mammoth mansions called Hospitals are erected in metropolises to mock the miserable masses.

The vaidya has been the only available medical succour to the millions of India and it will be moonshine to think of a modern dispensary for the mofussil in piping times of prosperity and much less possible in these days of universal economic depression prevalent in the country. What does it avail to the penurious villager to look at the costly palaces for the sick to be opened only by the key of Gold. Self-rule is the only law of Life and Ayurveda alone can make it possible for the dawn of the medical Swaraj for India.

No financial legerdemain can invent the means for the costly equipment of a doctor and a Dispensary for each village unit and the only remedy consists in disbanding the costly medical services and encouraging the Independent Medical Profession of whatever denomination.

The mabab concern of the Administration for the sick and the weak conceived by the Medical and Sanitary Departments is impossible of practical help owing to the financial stringency of the times and the best plan is to revive the autonomous medical relief system of India.

Even the fringe of rural India is not touched by the alien system of Medical Relief and it will be quite a job to grapple with the problem of Indian Medical Relief for Swaraj Government if it gets itself infatuated with the siren voice of western medical organisation and looks on Ayurveda with a cavalier indifference as it has done hitherto.

Medicine and Law, Doctors and Lawyers, are the bulwark of the Bureaucracy as Mahatma Gandhi wrote long ago and to give a fresh lease of life to the Medical Oligarchy in Swaraj by pinning our faith to the Official

System of Medicine is to perpetuate helotage of the worst sort, namely intellectual enslavement of India. While adaptation to the rapidly advancing material civilization has been impossible for the wealthiest nation of the world, America, it is indubitably so for India, the poorest country in the world.

Mahatma Gandhi has been the greatest diagnostician of India's ailment, Poverty, and hence his "Charka" and Loin Cloth have proved weapons of formidable force to terrorise London and Lancashire.

Buckingham Palace has been well exploded by this "Naked Fakir" who as the symbol of Indian Poverty has bombarded the sacrosanct precincts of the Palladinn of Modern materialistic civilization. It is upto the Ayurvedists of India to work for Medical Swaraj for India by showing the way out of the wood of material medical morass. "Back to Nature" must be their slogan. Lord Dhanwantri shall look after the weal of the noble army of Vaidyas and the Indian afflicted and let his system reign supreme from Cape Comorin to the Himalayas.

Give up your warped outlook and bask in the sunshine of India's rich Heritage bequeathed to us by Bhagawan Dhanwantri in His infinite Grace.

Gird up your loins, and be up and doing,

Sons of Dhanwantri, why sit ye idle,

Wait ye for some alien aid,

Then gird up your loins,

Be up and doing, Freemen by themselves are made.

Ayurveda is the sum total of human culture and knowledge and you need not go with a begging bowl to Modern Medicine for the alleviation of the sick and suffering in India. Will it, and Medical Swaraj is realised in the twinkling of an eye.

Om Tat Sat.

Original Articles

FEVER IN AYURVEDA

BY

ASHUTOSH ROY, L. M. S.

Hazaribagh.

—:o:—

(Continued from our last issue.)

Jvara-Kesari—Aconite, Mercury, Sulphur

Trikatu (3 carminatives)

Triphala (3 laxatives)

Croton seed

Mixed and made into pill with juice of

Bhringaraj (*Wadelia calendulaceæ*)

Adjunct—

For all fevers—with cocoanut water

For Pitta fever—with sugar and water

For Sannipat—with pulv. of Black pepper

For burning—with pulv. of Long pepper and Caraway.

Maha-jvarankusa—Aconite, Mercury and Sulphur

Dhatu seed

Trikatu, made into pill with water

Indicated in both Shyam and Niram stages of fever with pain all over the body and heaviness of the head, cough and impaired digestion; in Kapha and Vayu-kapha and Vayu fevers also in Visham Jvara (malaria) and in long continued fevers.

Adjunct—give with juice of leaves of Nishinda (*V. Negundo*), of Palita madar (*Erythra Indica*)—antibilious, if much pain in head and body (*e.g.* Influenza); give with ginger juice and honey—if constipation.

Kasturi Bhairab—Aconite and Cinnabar and Borax

Nutmeg and Mace (carminatives)

Long and Black peppers (carminatives)

Musk—stimulant, aromatic

are mixed and made into pills with ginger juice (4 grs.)

Indicated in Vayu-Kapha fever with pain of the sides of the body, cough and excess of sleep; also in Pitta and Sannipat fever; give $\frac{1}{2}$ dose (2 grs.) in cases of children, old men and weak individuals.

Javara-Kasturi—Aconite and Cinnabar and Borax (Antacid, good for throat)

Mace and Nutmeg (Aromatic carminatives)

Long and Black peppers (carminatives, good for Kapha)

Canabis seed

Musk and Makaradhwaj

made into pills with ginger juice.

Indicated in Vayu-kapha fever with excess of sleep, irritation of throat, catarrh of nose, headache and high fever, also in Pitta and Kapha fever.

Salpa-Jvarankus—Aconite, Mercury, Sulphur

Dhatura seed

Trikatu (3 carminatives)

made into pills with ginger juice and inside of seed of Lime.

Chintamani Rasa—Aconite, Mercury and Sulphur, Iron and Copper

Dhatura seed

Chitra (P. Zeylanica) - stimulant

Trikatu

made into pill with ginger juice and citrus acids.

(5) *In which Arsenic and Mercury are combined with Sulphur.*

Kalpa-taru Rasa—Mercury and Sulphur and Realgar.

Snake-poison (Stimulates the adrenals, very heating)

Bimala (origanum vulgare)—bitter

Borax

Trikatu (2 peppers and ginger)—carminative

It is very heating and stimulant, destroys Vayu-Kapha

Adjuncts :—with ginger juice in Vayu-Kapha fever, cough, asthenia and indigestion are benefited

If used as "Nasya" (Snuff) or "Pralepa" (paste), it relieves headache due to Vayu-Kapha, Delirium and Giddiness.

Nava-Jvarankusha—Mercury, Sulphur, Orpiment, Calcined

Borax, mixed with bile of "Rohee" fish into 2 gr. pills

It induces perspiration and relieves the temperature in Kapha and Kapha-Pitta fever.

Gada-murari—Mercury, Sulphur, Realgar, Iron-pyrites, Copper, Lead, Hingul (from which pure mercury is extracted)

Sitabhanji-Rasa—Mercury, Sulphur, Orpiment, Realgar are made into a paste with juice of Karala (*Momordica charantia*)

Apply this paste on copper plate and enclosing the whole thing in a crucible, roast in sand-bath for 12 hours

When cool, take out the copper plate and pulverize it and make into grs. IV pills, with black pepper. It should be taken enclosed in betel leaf.

Indications—In intermittent fever with shivering fits (Malaria etc.) give cold water or sugar cane juice and soup of *Phaseolus mungo*.

Visveswar-Rasa—Mercury, Sulphur, Copper, Iron, Orpiment

Katphal (*Myrica Sapida*)—Expectorant.

Mrisha Sringhi (*Gymnia Sylvestra*)—Bitter

Boeh (*Acorus calamus*)—Carminative

Dried ginger—Carminative

Bamanhati (*C. Siphonanthus*)—Expectorant

Haritaki (*C. Myrobalum*)—Laxative

Bala (*P. Odouereta*)—Aromatic, Stomachic

Coriandar—Carminative ; and add juice of

Khetpapa (*oldendalia corymbosa*) - antifebrile

Adjunct—Rock salt, juice of Kakmachi (*Solanum Nigum*)—diuretic

Vata-Pittantak Rasa—Mercury, Sulphur, Mica, Copper, Iron, Swarna Makshika (Iron Pyrites)

Mutha (*C. Rotundus*)—Diaphoretic

Glycerrhiza—Laxative

Grapes—Laxatives

Myrobalum—Laxatives

Safamuli—(*Asparagus Sarmentosus*)—diuretic, alterative to be mixed with juice of

Ghritakumari (*Iponcea Digitata*)—cooling, alterative ; to be taken with sugar and water in Vayu Pitta Fever.

(6) *Combination of Aconite, Arsenic and Mercury.*

Sambhunath Rasa—Aconite, Orpiment, Realgar, White Arsenic,

Cinnabar, Mercury, Sulphur, Borax, Alum and opium

Soak in juice of leaves of *Canabis Sativa* and

Nishinda (*Vitex Negundo*)—expectorant

Dhatura, Nim (Melia Azadirachta)—antifebrile; and make into 2 gr. pills

with ginger juice—in high fever with cough and diarrhœa.

Visha-Bati—Aconite, Mercury, Sulphur, cinnabar, orpiment, Borax, mica, rock salt, and black pepper

rub with bile from buffalows' liver into gr. IV pills.

Indicated in Pitta fever, Vayu-Kapha fever, fever with excessive heat and perspiration with burning of palm and sole (pitta excitation)

Adjunct—Ginger juice and honey.

Contraindicated in fever with vomiting and purging.

Chandeswar Rasa—Mercury, Sulphur, copper, aconite, white Arsenic. Rub in ginger juice for an hour, then soak in ginger juice and dry in the Sun; continue this process for 7 successive days ("Bhapna"), then soak in juice of Nishinda (V. Negundo) and give "Bhapna" (after soaking, dry in the sun) and repeat the process for 7 consecutive days.

Adjunct—Honey and ginger juice

Cold bath, Soothing oil application and nourishing meat soup to be given.

Indicated in Kapha and Vayu-Kapha fever with pain in the head and inside the body (Influenza group, Rheumatic fevers etc.) also in Niram stage of fever with headache.

Agar-Kasturi—Aguru (wood of aquillaria agaloecha—fragrant), musk, ginger and the two peppers, nutmeg, mercury, sulphur, orpiment, aconite, Rudraksha (Elaeocarpus ganitrus); mix with water into gr. IV pills.

Indicated in Pitta, Kapha-Pitta and Vayu-Kapha fevers in Sannipat with burning and sleepiness.

Adjunct—Ginger juice and honey.

Jvara-kulantak—Iron and mica, aconite, Kajjali (of mercury and sulphur), Cinnabar, Red and White arsenic, realgar, Root of Akanda (calatropis procrea—antifebrile), root of Karati (Nerium odourettum—cardiac tonic), croton seed.

N. B. Mica is silicate of Iron and Magnase—Haematinic.

Indicated in Vayu-Kapha and Pitta Kapha fevers accompanied with very high temperature.

Contraindicated in children, old men and delicate individuals. Give Rice with soothing food and drink.

PHYTO-ANALYSIS AND HOMŒOPATHY

BY

DR. G. MADDAUS,

Radebeul, Dresden

The latest conclusions that in plants animal hormones are also to be found, e.g. in the drug *Polygonatum offic.* an extract of the pancreas, similar to insulin, or in the tuber of rhubarb plant, the ingredients of the human liver, i.e. Cholesterine, have led to a new method of consideration, with regard to the relations between animals and plants, which may be especially applied to the scientific explanation of the homœopathic main principle. These relations between animals and plants may be explained phylogenetically.

Considering the development of plants and animals on the earth, from the primordial cell, we find that plant and animal classes have developed equally in a periodical change. The dependence on each other, as is known, is already conditioned by the plants inhaling carbonic acid breathed out by human beings and animals, and working it into starch, or sugar, respectively, and in exchange, exhaling oxygen, which is urgently acquired by human beings and animals for the purpose of life, i.e. that no plant is able to live without the presence of animals. But this dependence exists not only with regard to the respiration, but also with regard to the growth, the building up, and the vital forces.

The plants live from the excrements of the animals, or from their decayed bodies, and the animals live from the plants. Yet we know that the hormones of the animals in their decayed state are less at the disposal of the plants for the working up and the working on than in animal excrements, i.e. in the urine. We know that, for instance, women when pregnant develop already on the first day after conception pregnancy hormones in the urine. These may be applied according to the Zondeck method for the test of pregnancy. This method is carried out in such a way, that, for instance, 1/10 ccm. up to 1 ccm. of the urine of women is injected into young female mice. These show then, in the case of pregnant persons, a particularly speedy development of the ovaries. The result of this is that the secreted hormone develops its hormonal effect also in another class of animals.

The recently deceased Berlin physician, Dr. Zikel, was able to prove that a hormone displays also a specific effect in the plant. He manured some particularly valueless plants with animal hormones, and proved a characteristic change of the sap of these plants. With the enormous quantities of human and animal excrements, as Ernst Fuhrmann describes so well in his books "Agave" and "Der Bienenmensch", it is clear, that the working up of the excrements is for the plant, not only a question of satisfying the demand for oxygen, but the hormones, and enzymes found in the excrements are necessary for life, for the building up, and for the growth, and have even become a deciding factor for the development of the plant. One can affirm that genetically an animal period influences hormonally, and also with regard to the building up, the development of a plant period, and that the higher developed plant class contributes again to the further development of the animal class. So it has become a characteristic differentiation of the plants, which makes itself known, in that some plants seek the human dwelling places, while others avoid them, that means that plants which seek human beings, are dependent on their excrements, viz. Aconitum, Conium, Bursa pastoris, etc.

It is interesting that the influence of the human and animal excrements results in the further working up a bipolarisation in the plant. This allows itself to be proved particularly easily with regard to mushrooms. We see, for instance, on the cakes of the cow-dung in the meadows, two kinds of mushrooms grow, on the one side a mushroom which condenses, or takes over the aromatically relishable parts, that is the champignon, and on the other side a mushroom, which builds up and condenses the poisonous parts of the excrements, that is Agaricus phalloides. The tiniest pieces of this mushroom produce, when eaten by human beings, the appearance of intestinal poisoning, as appears when a motion remains too long in the body. From this and certain other similar comparisons, it follows that the poisonousness of a plant is at the same time a proof of the existence of that animal class, on the excrements of which this plant builds up, and the hormones, or the enzymes of which it condenses to poison. On the excrements of the reptiles we see the developing of poisons for reptiles. In the bird era, we observe the appearing of plants, for instance, umbelliferous plants, the seeds of which are poisonous specifically for birds. These seeds are, however, less poisonous for animal classes, which have developed before, or later than this era. Even

five carraway seeds are sufficient to kill a sparrow. Thus, the cabbage lettuce builds up on the excrements of rabbits, and hares, because for these, the so-called "heart leaves" of the cabbage lettuce are very poisonous, whereas, as is known, these leaves are not poisonous for human beings. We know that goats are absolutely insensitive, for instance, to opium, or morphium; cows and horses, however, are again, very sensitive to these. The papaveraceous plants, therefore, have only developed during the period of development of bovines, horses, and human beings. The poisons of the plants are, therefore, genetical condensations of the hormones, or intestinal excrements of certain classes of animals.

What signification has the physiological connection between animal and plant, for the healing value for each other, and for the healing power for human beings? This question is especially interesting for us. It signifies, according to Fuhrmann, removal of constitutional anomalies in the instance of supplying of the lacking or the diminishing of the surplus. When a human being completes ontogenetically in the womb, the development from the embryo, within nine months up to-day's perfection, this is a shortened course of the development of mankind on the earth from the primordial cell up. Should a disturbance, or even only a restraint enter, thus the fish nature, or the reptile nature is only incompletely, or too completely developed in the foetus. The infant is then born with a so-called tendency which we designate from the physical standpoint as constitution, from the psychical standpoint as a characteristic tendency. The constitutional, or characteristic anomalies are signs of lacking, or reversed, preponderance of periods in the ontogenesis. They may in all probability be influenced by the application of plants with hormonal condensations of the various animal classes.

Whether, indeed, it is possible to analyse the plant in this instance, is a question, the answer to which remains to be found in the future. The best method that we have at our disposal at the present time is the pathogenesis of the plants that means the proof of the efficacy of the plants on healthy persons as practised in homœopathy.

For the explanation of the particular symptoms occurring with this is yet a further account required.

The modification of the healing power as found in the plants is conditioned by various circumstances, viz. the growth in the sun causes the plant to produce a sap, e.g. with Cina, Colchicum,

Dulcamara, etc., which administered to healthy people produces sometimes a feeling of "improvement of the complaints by warmth." In case of heliopathic plants, e.g. *Daphne mezereum*, or *Agaricus*, we are able to state from the tests with the sap of these plants that "the complaints are improved by coldness. In case of climbing, or twining plants which have no support of their own, e.g. *Bryonia*, one finds sometimes with tests on healthy people the symptom "aggravation by movement." for the plant dies, if it is deprived forcibly of its support, on the other hand one finds with this plant the symptom "improvement by resting". Reversed, one finds with plants which creep by underground rhizomes, or overground shoots, e.g. *Rhus toxic.*, the symptom "improvement by movement." When the plant grows on soil containing salt, it thus develops particularly strong healing powers, e.g. it develops with *Artemisia marit.*, on soil containing soda, the efficacious *Santonin*. When *Artemia* is cultivated on soil containing no salt, it develops no *Santonin*. The plants which endure bruising, or a break, or a contusion by a good gallic formation, for instance, the broad plantain, *Symphytum offic.*, *Helianthus* or *Arnica*, have a very good regeneration hormone which may be used with success also with internal therapy in cases of broken bones, and contusions, but also externally for badly healing wounds, and abscesses on the skin. Plants growing in swamps, strongly containing humic acid, have a particular power to work up the uric acid, e.g. *Ledum palustris*, *Kalmia latifolia*.

Everywhere the healing power of the plants may be explained by the growth, and the nature of the ground, the building up on animal excrements, etc. The root has, generally speaking, strong resemblance to the stomach, and intestinal canal. It may be designated as an inverted intestine of the plant, it develops ferments, which assists in digesting the earth as we find it similarly in the human intestine. I will bring to notice the tubers of the roots of legumes filled with bacteria *radicicola*, or the symbiose of the mushrooms on the tips of the roots which are designated as *Mykorrhiza*. If one wishes to test, for instance, the ferments of a root, one makes a root creep over a polished marble plate. One sees then along the path, that the marble plate is lightly corroded. In short, we have to contend with absolutely similar relations between the roots of plants and the animal intestine. The root stock develops various hormones of the intestinal gland, as the liver gland, and the pancreas. It also shows peristalsis. This

continues in the overground plant in form of a pulsation, as we know this from the human pulse. We find with plants also nerves, a heart centre, and much which is comparable with animal organs. He who is interested in this, should read the beautiful book, "Pflanzen-schrift" ("Plant Autographs and their revelations"), of the Indian, Dr. Bose.

The bark serves for the protection against the attacks of animals and insects. The greater the attacks, the more capable of resistance is the bark, and the better is its medical usefulness. Thus we apply China-bark for malaria infection which attacks through the skin. One third of the diameter of the China-tree consists of bark. We apply the Ratanhia bark for chapped skin. A large overground development of the plant, and a neglect of the underground parts shows strong relations to the skin and the lungs, e.g. Mallow. The contents of the bundle of the vessels show a relation to the blood circulation, e.g. Camphor. When the plant grows on stones, or calcareous earth, the leaves, for instance, of the saxifraga variety, secrete large quantities of carbonate of lime, and for the assimilation of the lime in the human body the saps of this plant class are especially qualified.

The flowers of the plants have relations to the head and the genital organs, i.e. the hypsophylls, and the perigone leaves to the brain, and to the skull. I call to mind the development of the poppy head, and its effect on the brain, and the sepal floral leaves and stamina on the genital organs. The hypsophyll is with some plants of a very characteristic form. It wraps up the flower of *Arum tryphillum* with a necklike lancing, by which the insects are retained. The power of resistance of the hypsophyll against the attacks of the resisting insects is an explanation of the efficacy of this plant against the affection of the neck-organs, especially the larynx. The flower has sometimes a very energetic effect on the genital organs. One may think of the application of the flower of *Crocus sativus* which formerly has been misused for abortion. A tree which has been deprived of all its flowers is as ill as a woman practising abortion. A shrub with unfertile flowers as in the case with snowball (*Viburnum opulus*) has an inhibiting effect on the functions of the womb. With the powder, made of the root of this shrub all labour-pains can be brought to a standstill, i.e. to prevent a threatening abortion. Interesting is the efficacy of fungi growing exuberantly in flowers, and which also displays a strong efficacy on the genital organs, viz. the maize mildew

prospering on the spadix of the Indian corn (*Ustilago maidis*) has a specific effect on the uterus, also the ergot (*Secale cornutum*), which ripens in the flower of the corn, i.e. the genital organs.

The Phyto-analytical method of considering allows to appear always in a new light the pathogenesis of the plants, i.e., the picture of the symptoms as applied in homœopathy.

The approved homœopathic main symptoms, especially the mental symptoms, may be explained by the growth, the building up, and the mode of life of the plants. When *Pulsatilla pratensis* allows the large flower heads to droop, thus the mental symptom "the hanging of the head" is no fantasy of a subdued signature theory, but conditioned by the hormonal powers of the plant, which may be genetically established at a later time.

For this a greater co-operation between the botanist and the physician is essential. The physician must become again a botanist, and must regain from studying the symbiose of men and plants, the surety for the right application of the remedies.

I would like to mention, finally, still another claim, which for the practitioner arises from the application of the hormones of the plants. The hormones particular to the plants, not their poisons, are, as well as the vitamins bound up with the albumen of the plant, they are immaterial, i.e. not to be isolated, but a condition of the albumen. This albumen of the plant is contained unchanged in the fresh sap, or pap of the plants, but it is precipitated by the addition of alcohol. The homœopathic prime tincture which represents a mixture between the sap of the plant and alcohol and from which all turbidities, and precipitations have been filtrated out, is not the ideal final aim of the form of administration. If the full effect of the plant is desired, thus one is obliged, as Hahnemann already recommended in the second edition of his book, "Chronic illnesses", volume three, pages 176 and 230, to proceed from the triturations of the fresh leaves. The tests of *Conium* and *Digitalis* were undertaken by Hahnemann already with such fully effective triturations. Unfortunately the triturations from fresh plants could not proceed. This was owing to Grunar, who declared in first homœopathic pharmacopœia that one could renounce the prescription of these triturations, as the production would be too complicated.

To-day this reason is no more standing the test. We must return to the best form of administration, i.e. the trituration of the fresh plant.

In Germany these trituration are already obtained in mass production.

What concerns the producing of these triturations, Hahnemann has already drawn attention to them on page 268, footnote 2, of his book "Organon" (sixth edition, page 242) (what has been newly found, one hundred years later, by allopathy, see Trendelenburg, "Prescription for Remedies", second edition), that these powders are only then "for ever unperishable" i.e. durable, if they have been relieved of their superfluous moisture. These preparations are, therefore, according to the prescriptions of Hahnemann, to be made as free from water as is, on the whole, technically possible.

This condition has to be observed, when producing triturations from fresh plants. Triturations from fresh plants are to be favoured in the prescription, when it is essential to have the efficacy of the hormones particular to this plant.

Summary as follows :—

The phyto-analysis, i.e. the study of the building up, the growth, the mode of life of the plant, the test of the animal excrements condensed in the plants, the test of the hormones of the plants, gives the scientific base of the pathogenesis, i.e. the symptom-theory of homœopathy.

MIDWIFERY IN ANCIENT INDIA

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.

Calcutta.

VII

THE LYING-IN-ROOM.

Caraka says,—“Before the ninth month of pregnancy, the lying-in-room should be constructed. The land should be cleaned of bones, gravels and potsherds. The ground selected should be of auspicious colour, taste and smell. The gate of the house should face towards the East or the North. There must be a store of wood such as *Vilva* (*Ægle marmelos*), *Tinduka* (*Diospyros embryopteris*), *Inguda* (*Balanites Rox.*), *Bhallataka* (*Semecarpus anacardium*), *Varuna* (*Ocimum basilicum*), *Khadira*

(*Acacia catechu*) or wood of other kinds said to be auspicious by a Brahman versed in Atharvaveda; and there must be a sufficient provision for clothes, liniments, and covers. For the pregnant woman, be careful to have a fire-place, water, pestles and mortars, a privy, a bathing place, and ovens. These should be constructed according to the science of engineering and should be pleasant with regard to the season. There should be collected clarified butter, oil, honey, different kinds of salts, such as rock salt, sonchal salt, and black salt, *Vidangas* (*Embelic Ribes*), treacle, *Kustha* (*Saussurea lappa*), *Kilima* (*Pinus deodara*), *Nagara* (dried root of *Zingiber officinale*), *Pippali* (*Piper longum*), its root, *Hastipippali* (*Scindaspus officinalis*), *Mandukparni* (*Hydroctyle Asiatica*), *Ela* (*Elettarium cardamomum*), *Langali* (*Gloriosa superba*), *Vaca* (*Acorus calamus*), *Cavya* (*Piper cava*), *Citraka* (*Plumbago zeylanicum*), *Ciravilva* (*Pougamia glabra*), *Hingu* (*Ferrula Assafetida*), *Sarsapa* (mustard seeds), *Lasuna* (*Allium sativum*), finely or coarsely powdered rice, *Kadamba* (*Anthocephalus kadamba*), *Atasi* (*Linum usitatissimum*), *Vallija* (*Cucurbeta pepo*), *Bhurjja* (*Betula bhojpatra*), *Kulatha* (*Dolichos uniflorus*), *Maireya* (a spirituous liquor from the blossoms of *Lythrum fruitecosecence*), and *Asava* (vinous fermented liquid from sugar or molasses, Rum). Also collect two pieces of stone (muller and stone slabs), two pestles, two mortars, an ass, a bullock, two sharp needles of gold and silver, two skeins of threads, sharp instruments of steel, two wood bedsteads (of *Ægle marmelos*), and wood of *Tinduka* and *Ingudi* for easily igniting fire. The female attendants should be mothers of children and friends and relatives of the patients. They must be fond of her, skilful in work, intelligent, jolly, laborious, full of tender love for the children and a favourite of the mother."

Surgical Instruments of the Hindus, vol. I. Pp. 38-40.

"The best sort of grounds should abound with milky trees full of fruits and flowers; the boundary should be of a quadrangular form, level and smooth, with a sloping declivity towards the east producing a hard sound, with a stream running from left to right, of an agreeable odour, fertile, of an uniform colour containing a great quantity of soil producing water when dug to the height of a man's arm raised above his head, and situated in a climate of moderate temperature."

Manasar, Ch. I. quoted in Ram Raj's *The Architecture of the Hindus* p. 16.

प्राक् चैवास्या नवमान्मासात् सूतिकागारं कारयेदपहृतास्थिशर्करा-
कपाले देशे प्रशस्तरूपरसगन्धायां भूमौ प्राग्द्वारमुदगद्वारं वा बैल्वानां
काष्ठानां तैन्दुकानामैङ्गुदानां भास्वातकानां वारूणानां खादिराणां वा ।
यानि चान्यान्यपि ब्राह्मणाः शंसियुरथर्ववेदविदस्तेषां च वसनालेपना-
च्छादनापिधानसंपदुपेतं । वासुविद्याहृदययोगिनाग्निसलिलोदूखल-
वर्चःस्थान-स्नानभूमि-महानसोपेतम् । ऋतुसुखं च ।

तत्र सर्पिरे लमधुसैन्धवसौवर्चलकाललवणविडङ्गगुडकुष्ठकिलिम-
नागरपिप्पलीमूलहस्तिपिप्पली मण्डूकपर्णेलालाङ्गलिकीवचाचव्यचित्रक-
चिरबिल्वहिङ्गुसर्पिलशुनकणकणिकानीपातसीवल्लीजभूर्जाः कुलत्थमैरेय-
सुरासवाः सन्निहिता स्युः । तथाश्मोनी ह्री । हे चण्डमृषले । हे
उलूखले । खरोवृषभश्च । ह्री च तीक्ष्मो सूचोपिप्पलकी सौवर्णराजतौ ।
शस्त्राणि च तीक्ष्णायसानि । ह्री च बिल्वमयी पर्यङ्की । तैन्दुकैङ्गुदानि
काष्ठान्यग्निमधूक्षणाणि । स्त्रियश्च वह्न्यो वह्नुः प्रजाताः सौहार्दयुक्ताः
सततमनुरक्तार प्रदक्षिणाचाराः प्रतिपत्तिकुशलाः प्रकृतिवत्सलास्त्यक्त-
विषादाः क्लेशसहिष्णवोऽभिमताः । ब्राह्मणाश्चाथर्ववेदविदः । यच्चान्यदपि
तत्र समर्थं मन्यते । यच्चाण्यच्च ब्राह्मणाः व्रयुः स्त्रियश्च ब्रह्मास्तत् कार्यम् ।

Caraka Samhita, IV. viii.

We have already quoted the description of the Lying-in-room as given in the *Susrutasamhita*. Later authorities follow the directions of Susruta. Bhava Misra says "The Lying-in-room should be eight hands long and four hands wide and should face towards the East or South as recommended by Susruta—

अष्टहस्तायतं चारुचतुर्हस्तविशालकं ।

प्राचीद्वारमुदगद्वारं विदध्यात् सूतिकागृहम् ॥

Bhavaṇṇaprakasa.

We find similar descriptions in modern text-books. I quote a passage from the *Encyclopædia Medica*, vol. 6. P. 1882.

The Choice of a Room—

"The room in which a labour is to take place should preferably be large and airy, with a southern or western exposure if possible. A patient always gets on better if the room is light and gets a certain amount of sunshine. There should be an open fire-place (not a gas stove) and a good window to insure proper ventilation..... The bed should be fairly hard.....

made up in the ordinary way, then covered with a mackintosh sheet well tucked over the edge and covered with a draw-sheet. It is of great advantage to have over this a thick square of absorbent wool, which is burned after it is soiled by discharges. This should be changed once or twice during labour."

I received the following letter regarding the खरोवृषभश्च, *Khara* and *Vrisabha*, as mentioned by Caraka as necessary for the Lying-in-room—

171, Budhwar, Poona City,

3-3-28

Dear Dr. Mukhopadhyaya,

While hunting out for 'Obstetrics' in the Sanskrit Medical literature I came across the following in Caraka.

हे चण्डमुखली, हे उदूखली, खरो वृषभश्च * *

चरक, शा, अ: ८ ।

(Nirnayasagar Edition with Commentary.) The commentator makes no mention about it. Susruta does not give any similar description. Astangasangraha अष्टाङ्गसंग्रह takes no notice of this particular passage but copies out one in the next paragraph in Charaka, i.e.,

खरस्य वृषभस्य वा जीवतो दक्षिणं कर्णमुद्धृत्य दृष्टदि नर्जरोक्त्य

This relates with the अपरापातनं कर्म. The commentator however does not give any explanation. अष्टाङ्गहृदय (Astanga-hridaya) makes no mention about such thing. Shri J. N. Sen in his 'Upaskara' Commentary gives खरः गर्धभः । That is too plain. In your book 'Surgical Instruments of the Hindus' p. 40, you have translated the words similarly, i.e., "An ass and a bullock". To my mind it sounds much unreasonable. Some do take the view that such prescriptions which abound in Sanskrit medical literature are the precursors of Organotherapy. Even granting that, I cannot imagine the value of that piece of ear in placental delivery. If it were blood that was required, it could easily be had by venesection which was largely practised then.

I would be much obliged if you kindly help to advise if I am any way wrong in my presumption that the passage must be meant in quite a different manner than what is being done up till now.

Wishing this deserves your kind attention and hoping to be excused for the trouble.

Yours sincerely,

(Sd.) G. D. Apte.

I could not send any reply to this letter as I was not able to satisfy myself about the usefulness of the ears of the ass and bullock. I searched in the medical literature as far as I could but I found no such passage anywhere, except in the *Astanga-samgraha* which has quoted *verbatim* a passage from Caraka as mentioned in the letter. I however, collated the readings in the different editions of the *Caraka Samhita*, and the readings stand thus in the different editions which I have been able to consult—

J. N. Sen's Ed.—

1. खरो वृषभश्च ।

C. S., IV. viii P. 1314.

खरो गर्दभः ।

Upaskara, IV. viii. 1314.

2. खरस्य वृषभस्य वा जीवतो दक्षिणं

कर्णमुत्कृत्य दृषदि जर्जरीकृत्य ।

C. S., IV. viii. Pp. 13221—22.

जीवतः खरस्य वृषभस्य वा दक्षिणं कर्णं

उत्कृत्य कृत्वा दृषदि प्रस्तरे

जर्जरीकृत्य कुट्टयित्वा ।

Upaskara, IV. viii. Pp. 13231—22.

Trivikrama Jadaba

Sarma's Ed.—

1. खरो वृषभश्च ।

C. S., IV. viii. P. 387.

2. खरवृषभस्य वा जीवतो etc.

C. S., IV. viii P. 390.

Bangabasi Ed.—

1. खरो वृषभश्च ।

C. S., IV. viii. P. 278.

2. खरवृषभस्य जरतो वा दक्षिण कर्ण-

मुत्कृत्य दृषदि जर्जरी कृत्वा

C. S., IV. viii. P. 280.

Satis Ch. Sarma's Ed.—I. खरो वृषभश्च ।

C. S., IV. viii. P. 563.

2. खरवृषभस्य जरतो वा दक्षिणं कर्ण-
मुत्कृत्य दृषदि जर्जरीकृत्य ।

C. S., IV. viii. P. 566.

Gangadhara's Ed.— I. खरो वृषभश्च ।

C. S., IV. viii. P. 235.

खरोगर्जभः वृषभोऽनङ्गान् ।

Jalpakaalpataṛu, IV. viii. Pp. 235—36.

2. खरवृषभस्यजरतो वा दक्षिणं कर्ण-
मुत्कृत्य दृषदि जर्जरीकृत्य

C. S., IV. viii. P. 240.

खरवृषभस्य पुंगर्जभस्यजरतोवृद्धस्य दक्षिणं
कर्णं वा उत्कृत्यकर्त्तनं कृत्वा
जर्जरीकृत्य कुट्टयित्वा

Jalpakaalpataṛu, IV. viii. P. 240.

Vaman K. Datar's Ed.—

Nirnay-Sagara Press—I. खरवृषभश्च ।

C. S., IV. viii. P. 343.

2. खरवृषभस्य वा जीवतो दक्षिणं कर्ण-
मुत्कृत्य दृषदि जर्जरीकृत्य ।

C. S., IV. viii. P. 344.

The commentator Cakrapanidatta is silent in his commentary *Ayurvedadipika* about these passages.

Thus we find that the prescription containing the decoction of the minced right ear of the ass or bullock occurs in the original *Carakasamhita* and is quoted in the *Astangasamgraha* of Vagbhata I, whose date has been provisionally fixed at the First Century B. C. (see *History of Indian Medicine*, vol. III. p. 795). It seems, however, strange that this prescription does not occur in any of the later medical treatises, not even in the *Astangahridayasamhita* written by Vagbhata II. This fact is one of the internal evidences in support of our opinion that the two Vagbhatas, the authors of the *Astangasamgraha* and

Astangahridayasamhita, are different individuals and not one and the same person.

In the different readings quoted above, we find that the adjective 'Jivato' जीवतो or 'living' has a variant reading 'Jarato' जरतो or 'old'. But for all practical purposes the readings are the same in the different editions.

We do not know anything about the efficacy of such a prescription, and evidently the later authorities did not attach much importance to it, otherwise they would not have all ignored it. So that it remains as a relic of the ancient medical practice. The prescription runs as follows.—“The right ear of a male ass or a bullock, living or old, is torn away ; it is then thoroughly minced on a stone slab, and then thrown into the decoction of *Vallaia* (*Saccharum cylindricum*) or other ingredients, and is then taken out of it after a minute.” This decoction is then given to the puerpera as a drink, and this produces then its activity as a stimulant to placental delivery. The efficacy of the remedy requires confirmation by test experiments, and unless it is done, I do not advise any woman to try it during her confinement. The prescription is no doubt unique. But it cannot be considered as an interpolation by later writers, even though it does not appear in the writings of Susruta and other writers of text-books. We find it in the writings of Caraka and Vagbhata I., both very ancient and reputed authorities in the Ayurvedic medical science.

It should be noted that the therapeutic agent here is not the blood, (the blood might have been secured in other ways), nor the soft parts of the ear (the musculo-cutaneous structures are removed after dipping them for a moment); it may be some peculiar property of a substance, unknown to us, which may be manifested by such a decoction. It may be organo-therapy, but we do not know of any glandular structure, the secretion of which is contained in the right ear of animals mentioned. It may be the wax of the ear that serves to stimulate the birth of the secondines. But all this is guess. I have, however, found out another prescription which contains the wax of the ears and the rheum of the eyes of a buffalo as ingredients of a preparation, known as *Rasaranjaka* which is said to improve the quality of iron, lead, gold, and copper. This prescription occurs in the *Rasendracintamani*, p. 19 and it runs as follows—

अत्र गन्धर्वतैलमपि रसहृदयस्वरसात् ।

ऊर्णाटङ्गगिरिजतु महिषीकर्णाक्षिमल इन्द्रगोप कर्कटकाः
हृन्मेलापकौषधानि । etc.

Here we find an example which proves that the original writings in the Sanskrit medical literature require confirmation by observation and experiment. We may discard them if we find them useless, but for reasons that such prescriptions are curious or seem to us as 'unreasonable,' we cannot delete such passages from the ancient authorative text books.

But the prescription is not so curious as it may seem at first sight. Similar prescriptions are found in countries, situated far from India, among people who are fairly advanced in point of civilisation. The use of the parts of the body of animals in the treatment of difficult labour, we find, in the list of local drugs in the *Medical Practices and Superstitions of Kordofan*, in the *Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum*, p. 299.

"45. *Um Baishat*.—Dried muscle-tissue taken from the left shoulder and upper arm of the porkupine (*Um Baishat*). It is administered in cases of difficult labour in the form of powder which is mixed with water and swallowed."

THE AFTER-BIRTH.

After the child's birth, you should enquire if the placenta has been safely delivered. If not, press with force over the navel region of the mother with your right hand, and shake her by your left hand placed on her back. Then with your heel, fix the pelvis and press well the two buttocks together. Introduce her hair into her throat, so that she may be nauseated and helching may occur.

Then apply fumigation to the vagina by burning *Bhurjapatra* (leaves of *Betula bhojapatra*), glass, or the cast skin of a snake, and prescribe the paste of *Kustha* (*Saussurea lappa*), *Talisa* (*Pinus Webbiana*), with the infusion of *Vallaja* (*Saccharum cylindrica*) root, or with wine or yeast or with the infusion of *Kulattha* (*Dolichos uniflorus*), or with the infusion of *Mandukaparni* (*Hybracotyle Asiatica*) and *Pippali* (*Piper longum*). Also prescribe the paste of *Ela* (*Elettaria cardamomum*), *Kilima* (*Pinus deodara*), *Kustha* (*Saussurea lappa*), *Nagara* (*Zingiber officinale*), *Vidanga* (*Embelia Ribes*), black-salt, *Cavya* (*Piper*

chaba), *Pippali* (*Piper longum*), *Citraka* (*Plumbago zeylanica*), *Upakuncika* or cumin seeds (*Cuminum cyminum*); also scrape the cut right ear of a living or old male ass or bullock, press and mince it well on a stone-slab, soak it in the infusion of *Vallaja* (*Saccharum cylindrica*) for a moment; add the paste to the infusion, and let her drink the infusion. Apply cotton well-soaked in oil boiled with *Sankhapuspa* (*Canscora decussata*), *Kustha* (*Saussurea lappa*), *Madanaphala* (*Randia dumetorum*), and assafoetida and introduce the cotton in the vagina. Also use the oil for enema. Prescribe *Madanaphala* (*Randia dumetorum*), *Jimuta* (*Luffa pentandra* and *acutangula*), *iksaku* (wild variety of *Lagenaria vulgaris*), *Dhamargava* (*Luffa Egyptica*), *Kutaja* (*Holarrhena antidysenterica*), *Krtavedhana* (*Luffa amara*, *L. plackitiana*, *L. fætida*), *Hastiparni* (*Luffa cylindrica*), as paste with infusion of *Vallajadi* group (*Saccharum cylindricum*), for a restorative enema. This purgative acts with the *Vayu* and forces the placenta to be expelled with the passage of flatus, faeces and urine, which were preventing the descent of the after-birth.

यदा च प्रजाता स्यात् तदेनामवेक्षेत काचिदस्या अमरा प्रपन्ना न वेति । तस्याश्चेदपरा न प्रपन्ना स्यादथेनामन्यतमा स्त्री दक्षिणेण पाणिना नाभेरुपरिष्ठाद्वलवन्निपीड्य सव्येन पाणिना पृष्ठेन उपसंगृह्य तां सुमिधृतं निर्धुनुयात् । अथास्याः पोश्चर्मा श्रोणीमाकोटयेत् । अस्याः स्किचाबुप-संगृह्य सुपीडितं पीडयेत् । अथास्या बालवेण्या कण्ठतालु परिमृशेत् । मूर्जपत्रकाचमणिसर्पनिर्मोकैश्चास्या योनिं धूपयेत् । कुष्ठतालीशकल्कं बल्लजक्ताये भैरेयसुरामण्डे कौलत्ये वा यूपे मण्डूकपर्णीपिप्पलीक्ताये वा संप्लाव्य पाययेदेनाम् । तथा सूक्ष्मैलाकिलिमकुष्ठनागरविडङ्गकालविड-गुडचव्यपिप्पली चित्रकोपकुञ्चिकाकल्कं खरस्य वृषभस्य वा जीवतो दक्षिणं कर्णमुत्कृत्य वृषदि जर्जरीकृत्य बल्लजयूषादीनामन्यतमे प्रक्षिप्याप्लाव्य मुहुर्त्तस्थितमुद्धृत्य तदाप्लावनं पाययेदेनाम् । शतपुष्पाकुष्ठ-मदनहिङ्गुसिद्धस्य चैनां तैलस्य पित्तुं ग्राहयेत् । अतश्चैवानुवासयेत् । एतैरेव चाप्लावनैः फलजीमूतकेक्षुकुधामार्गबकुटजकृतवेधनहस्तिपर्णुप-हितैरास्यापयेत् । तदास्यापनमस्याः सह वातमूत्रपुरीषैर्निर्हरत्य-परमासत्तां वायोरनुलोमगमनात् । अपरां हि वातमूत्रपुरीषाण्यन्याणि चान्तर्बहिर्मुखानि सज्जन्ति ।

Caraka Samhita, IV. viii.

THE BABY'S ROOM.

The engineer is to construct a room, spacious, beautiful, full of light, well-ventilated, but free from draughts, strong, and free from beasts of prey, animals with fangs, mice and insects. There should be kept water, mortar, and separate places should be assigned for bathing, cooking, urination, and defæcation. It should suit the season of the year. The beddings, seats and covers should be comfortable and suitable to the season. Auspicious ceremonies should be performed in that room such as *homa*, expiations, and presents to gods, for the proper protection of the child; and there should be present pious old men, doctors, and devoted attendants constantly. The child's bed-covers and sheets should be soft, light, pure and scented. These should always be free from sweat, dirt, worms or bugs, urine, and faeces. If repeated changes of new clothes be impossible, the soiled coverings should be well-washed and the beddings well purified with steam and thoroughly dried before they are used again. To purify or sterilise the dress, beddings, coverings and sheets by fumigation, use the following medicines with clarified butter;—Barley, mustard seeds, linseeds, assafoetida, *Guggula* (*Balsomodendron mukul*), *Vaca* (*Acorus calamus*), *Coraka* (*Andropogon auricularis*), *Vayastha* (*Chebulic myrobalum*), *Golomi* (*Panicum dactylon*), *Jatila* (*Nardostachys jatamansi*), *Palankasa* (a variety of guggula), *Asoka* (*Saraca Indica*), *Rohini* (*Picrorrhiza kurroa*), and snake's skin. A variety of toys should be at hand and these should be coloured, light, musical, beautiful, and must not be sharp pointed. They should be of such a size and shape that they cannot be put into the child's mouth or do not terrify or kill the child.

अतोऽनन्तरं कुमारगारविधिमनुष्याख्यास्यामः । वास्तुविद्याकुशलः प्रशस्तं रस्यमतमस्कं निवातं प्रवातैकदेशं हृदमपगतश्चापदपशुदंष्ट्रि-
मुष्पिकापतङ्गं सुविभक्तसलिलोदूखनमूच्चवर्जः स्थानस्नानभूमिमहानसमस्तु-
सुखं यथतु शयनासनास्तारणसंपन्नं कुर्यात् । तथा सुविहितरक्षाविधान-
बलिमङ्गलहोमप्रायश्चित्तं शुचिवृद्धवैद्या नुरक्तजनसंपूर्णम् ॥

इति—कुमारगारविधिः ॥

शयनास्तारणप्रावरणानि कुमारस्य मृदुलघुशुचिसुगन्धोनि स्युः ।
स्वेदमलजन्तुमन्ति मूत्रपुरोषोपसृष्टानि च वर्ज्यानि स्युः । असति

संभवेऽन्वेषां तान्येव च सुप्रक्षालितोपधानानि सुधूपितानि शुद्धानि
शुष्कान्युपयोगं गच्छेयुः ॥

धूपनानि पुनर्वाससां शयनास्तारणप्रावरणानां च यवसर्षपातसौहिद्र्य-
गुग्गुलुवचाचौरकवयःस्थगोलोमीजटिलापलङ्कषाऽशोक-रोहिणीसर्पनिर्मो-
कानि घृतयुक्तानि स्युः ॥

मणयश्च धारणीयाः कुमारस्य । खड्गं गुरुगवयवृषभाणां जीवतामेव
दक्षिणेभ्यो विषाणेभ्योऽग्राणि गृहीतानि स्युः । ऐन्द्राद्यश्वौषधयः ।
जीवकर्षभकौ च । यानि चान्यान्यपि ब्राह्मणाः प्रशंसेयुरथर्ववेदविदः ॥

Protecton of thild and the mother.—The Lying-in-room must be surrounded by the branches of *Adani* (*Luffa pentandra* and *acutangula*), *Khadira* (*Acacia catechu*), *Karkandhu* (*Zizyphus sororia*), *Pilu* (*salvadora Persica*), *Parusaka* (*Grewia Asiatica*), and spread white mustard, linseed, *mudga* (*Phaseolus mungo*), and rice particles in the room. And so long as the ceremony of *namakarana* or naming of the child is not performed, perform *homa*, *bali* and other auspicious acts, every morning and evening, and keep a big iron pestle slantingly on the door; and tie *Vaca* (*acorus calamus*), *Kustha* (*Saussurea lappa*), *Ksaumaka*, *asafaetida*, white mustard, linseed, garlic, and rice-particles in a cloth, and hang the bundle on the northern wall of the room, Tie a similar bundle around the throat of the mother and the child, around water vessels, beadstead and door. There must be rice particles, water vessels, fire-wood, and burning charcoal in the room. The midwives and her friends must be there; they must remain awake and keep watch for ten days. During this period you must be careful that charity, auspicious acts, benediction, song and instrumental music be not completely stopped. The food and drink must be pure and clean. The attendants must be cheerful, obedient and fond of the mother and her child. A Brahmin should perform expiatory acts every morning and evening.

अथास्य रक्षां विदध्यात् । आदानौर्खदिरककंसुपौलुपुरुषकशास्त्रा-
भिरस्या गृहं भिषक् समन्ततः परिवारयेत् । सर्वतश्च सूतिकागारस्य
सर्षपातमीतण्डुलकणकणिकाः प्रकिरेत् । तथा तण्डुलबलिमङ्गलहोमः
सततमुभयकालं क्रियते प्राङ् नामकर्मणः । द्वारे च मूषलं देहलीमनु-
तिरश्चिनं न्यसेत् । वचाकुष्ठक्षौमकहिङ्गुसर्षपातसौलशुनकणकणिकानां
रक्षोघ्नसमाख्यातानां चौषधीनां पीटलिकां बद्धा सूतिकागारस्योत्तरदेह-

लामवसृजेत् । तथा सूतिकायाः कण्टे सपुत्रायाः । स्याद्युदकुम्भ-
पर्यङ्केष्वपि । तथैव द्वयोर्द्वारपक्षयोः । कणकण्टकतिन्दुककाष्ठे न्यन-
श्याग्निः सूतिकागारस्याभ्यन्तरतो नित्यं स्यात् । स्त्रियस्यैनां यथोक्तगुणाः
सुहृदश्चाणु जागृद्युदंशाहं द्वादशाहं वा । अनुपरतप्रदानमङ्गलाशीः
सुतिगीतवादित्वमन्नपानविशदमनुरक्तं प्रहृष्टजनसंपूर्णं च तद्देशं कार्थ्यम् ।
ब्राह्मणश्चाथर्ववेदवित् सततमुभयकालं शान्तिं जुहुयात् स्वस्थयनार्थं
कुमारस्य तथा सूतिकायाः । इत्येतद्रक्षाविधानमुक्तम् ॥

Caraka Samhita, IV, viii.

On the tenth day the mother should come out of the room with her child, rub themselves with *Sarvounsadhi*, white mustard, and *lodh kalka* or paste of *Symplocos racemosa*. Then she must dress herself with light, entire and pure clothes and beautiful ornaments and she should touch auspicious objects first. Then she should propitiate her god, and having performed ceremony of expiation by a good Brahmin who has a *sikha* (a bunch of long hairs) on his head and who is of good form and is dressed in white dress. The child is to be covered entirely with an entire white cloth. The child's head should be directed towards the East or the North, and the father should say that the child is bowing first to the Gods and then to the Brahmins. He should select a name for the child according to the star of nativity or according to his own wish. The first and the last letters of the name must be selected from the three final letters of the letter-groups, or it may suffice, if *usmanta varna* be at the end. One should be careful that the name does not coincide with the name of his grand or great-grand-father. Another name which is fixed after the stars should consist of two or four words.

दशमेऽहनि सपुत्रा स्त्री सर्वगन्धोषधैर्गौरमर्षपलाघ्रैश्च स्नाता
स्वयंहतशुचिवस्त्रं परिधाय पवित्रेष्टलघुभूषणवती च संस्पृश्य
मङ्गलान्युचितामर्चयित्वा च देवतां शिदिनः शुक्लवाससोऽव्यङ्गाश्च
ब्राह्मणान् स्वस्ति वाचयित्वा कुमारमचतेन शुचिनावाससाच्छादयेत्
प्राक्कशिरसमुदकशिरसं वा संवेश्य । देवतापूर्वं द्विजातिभ्यः प्रणमतौत्युक्त्वा
कुमारस्य पिता हे नामनी कारयेन्नाक्षत्रिकं नामाभिप्रायिकं
तत्राभिप्रायिकं च । नाम घोषवदाद्यन्तःस्थान्तमुष्मान्तं वाऽवृद्धं
त्रिपुष्पान्तरमनवप्रतिष्ठतम् । नाक्षत्रिकं तु नक्षत्रदेवतासंयुक्तं कृतं
द्व्यक्षरं चतुरक्षरं वा ॥

Caraka Samhita, IV, viii.

Health and Hygiene

—:—

WORRY CAN BE CURED!

BY SIR W. ARBUTHNOT LANE

(*In an Interview*)

Is your life made a perpetual misery by fear about your job, your family's health, the rent, or the next instalment on the Insurance? It needn't be because things usually work out right somehow. But you'll go on worrying—unless you put your health in order.

Worry is one of the greatest bugbears of our present-day civilisation. It is not only responsible for untold misery to millions of men and women, who could easily avoid it, but its poison leads to the increase and intensification of the same physical troubles which are always instrumental in promoting it.

And the mental effects are often infinitely worse than the physical. The disease of worry has only one primary use—faulty nutrition of the brain.

IT MUST BE HARMFUL

The habit of giving way to this complaint, of allowing the physical condition which gives rise to it, can do no possible good, and must inevitably be harmful.

A certain amount of anxiety over the small things of life, as well as the great, must be accepted, of course, as inevitable. But worry, "for its own sake"—that is, the unnecessary occupation of the brain by futile fears and magnified grievances and unhealthy thoughts of every description—the worry generally associated with "nerves," merely exists in proportion to feeling.

Just as the desirable state of health and happiness can never exist in combination with the state of worry, as a clear brain, devoid of injurious influences, can never exist supported by faulty nutrition.

The brain is a machine, a very complicated piece of mechanism, which cannot function without natural fuel.

"OILING" THE BRAIN

A motor-car is perhaps the best simile to adopt for the purpose of making the point quite clear. If a motor-car runs out of petrol it stops altogether and refuses to move. Similarly, if the human brain and body receive no nourishment at all, they merely cease to function and die.

But if a motor-car with a tank full of petrol runs out of oil, or the oil becomes frozen, the machinery becomes clogged and the cylinders eventually seize up.

The human brain also requires oiling. Its mechanism must be kept in order, not only by fuel or food, but by the reaction of the parts to the food supplied.

Food and drink, in their right proportion and selection, provide the necessary fuel for the body and brain, and also the oil to ensure the smooth running of the machinery.

NO FALSE MODESTY

There should be no false modesty about this smooth running. Constipation, without the slightest doubt, is by far the greatest factor in the creation of worry.

Why? Because material stagnating in the gastro-intestinal tract becomes foul and decomposed and consequently develops deadly poisons.

These poisons are absorbed into the circulation and prove extremely injurious to the functioning of every cell in the human composition.

To cure constipation, therefore, is to cure worry, and this can only be done by recognising that worry is physical, and obeying the laws of Nature by consuming fresh, raw food.

Again, worry is often the direct prelude to nervous breakdown, and I cannot do better than quote before a few sentences from a lecture delivered recently by Dr. Macpherson Lawrie under the auspices of the New Health Society.

The lecturer, who has devoted much time to the study of the nervous system, said that so-called "nerves" were really due to starvation, to exhaustion and to poisoning.

"Unless we see to it that our organs, our glands, our nervous systems are looked after, sooner or later every one of us will feel the strain and suffer perhaps for years under nervous and emotional disorders.

FRESH FOOD AND SEVERAL TUMBLERS OF WATER

"For the strongest amongst us has his breaking-point, and every serious nervous breakdown has a beginning. The more serious symptoms may not develop, but those of us who live on a bare minimum of fresh food, are living on the edge of a mental precipice, on the verge of nervous exhaustion which may grow into so grave a disorder as to require care in a mental home."

The lecturer went on to stress the importance of eating fresh food and of drinking several tumblers full of water daily, in excess of anything else.

"To see that our systems are not poisoned we must attend to these four drains," he concluded, "the lungs, the skin, the kidneys and the bowels. Neglect of these will poison as slowly but surely, until we become a useless member of society, a burden to ourselves and our friends."

This is a timely warning. It applies equally to nerve cases and to the victims of worry.

Worry can be cured !

—*The Hindu.*

SCIENCE AND HAPPY MARRIAGES

Doctor's Claim to Decide Suitability of Couples

SHAW ON RELIGION

INTERVIEWS WITH CELEBRITIES IN "GLIMPSES OF THE GREAT."

Will scientists be able within a few years to change the sex of a man or a woman ? Will they be able to bring the priceless boon of children to those who have hitherto been childless ?

Such questions are prompted by some chapters in a remarkable new book, "Glimpses of the Great," by George Sylvester Viereck (Duckworth, 2rs. net), published recently.

Astounding accounts of the achievements of the scientists of Central Europe are contained in this series of interviews with famous people, gathered by the part-author of "My First Two Thousand Years."

"Happy marriages are not made in Heaven, but in the Laboratory," is a revolutionary view expressed by Dr. Magnus Hirschfeld, head of the great Sex Science Institute in Berlin.

Among other works, this scientist claims to be able to tell with absolute certainty whether a man and a woman are fitted to embark on a pappy marriage.

LOVERS' QUARRELS

"We are in a position to see if a disagreement is merely a lovers' quarrel, that can be adjusted with a little forbearance on either side, or if it rests upon fundamental psychic or physical differences so pronounced as to render reconciliation not even advisable.

"We invariably advise divorce where no good may be expected for either of the parties, or for their children, from the continuation of marriage."

There is an account of the work of another modern wizard, Steinach. His methods of rejuvenating men and women without surgical operations of the Voronoff kind are briefly sketched, and he has miraculous things to show in experimental changes in the sex of animals.

"I was thrilled," writes Mr. Viereck, "when Professor Steinach showed me the first guineapig which was born as a male and woke up as a female !

The problem of the childless marriage has already been explained by biochemical theory, and Steinach and his co-workers hope eventually to provide an effective remedy.

Statesmen and philosophers are among those interviewed. Here are some characteristic utterances :—

BERNARD SHAW :—"This much I know, looking at life after seventy : men without religion are moral cowards, and mostly physical cowards, too, when they are sober.

"Civilisation cannot survive without religion. I can conceive of salvation without a God, but I cannot conceive of it without a religion."

THE EX-KAISER WILHELM :—"Two things sustain me in my exile ; sense of duty and my sense of humour.

GEORGES CLEMENCEAU :—"A Parliament of peace changes nothing ! International leagues do not obliterate international rivalries."

BENITO MUSSOLINI :—"Italy must have breathing space. We want no war. But we cannot live without air."

ARISTIDE BRIAND :—"We have had a military peace conference. We have had a political peace conference. What is needed now is a financial peace conference to put the world on its feet "

Notable persons interviewed include Mr. Ramsay MacDonald. Foch, Joffre, Voronoff, Keyserling, Einstein, Emil Ludwig, Henry Ford and many others.

—*Daily Mirror.*

Reports of Societies, etc.

—:o:—

DRUGS ENQUIRY COMMITTEE REPORT

Far-Reaching Proposals

Strict Check On Imported Drugs

New Delhi, Dec. 1.

Proposal of far-reaching character are made in the Report of the Drugs Enquiry Committee which has just been issued. Legislative control of drugs and pharmacy, registration of practitioners of indigenous medicine, imposition of additional five per cent. duty on imported chemicals and drugs and an additional twenty per cent. duty on medicines with undisclosed formula and establishment of Central and Provincial Laboratories are among the recommendations made by the Committee whose report is unanimous. The committee consisted of Dr. R. N. Chopra, chairman, Father J. F. Caius, Mr. H. Cooper and Mr. Abdul Matin Chaudhury members and Mr. C. Govindam Nair, Secretary. The various proposals made by the Committee fall under the following heads :—

- (1) British Pharmacopoeial and well-known and approved medicines.
- (2) Profession of pharmacy.
- (3) Patent and Proprietary Medicines.

- (4) Medicines made from indigenous drugs.
- (5) Development of the drug industry in India.
- (6) Government Medical Stores Depot.
- (7) Indian Pharmacopoeia.
- (8) Quinine policy.

LEGISLATIVE CONTROL.

The Committee states that there should be legislation to control drugs and pharmacy. The control in respect of drugs should be for those included in the British Pharmacopoeia and other known and approved medicinal preparations whether indigenous or not.

Legislation should be central with a view to secure effectiveness and uniformity to control throughout India.

Legislation should not be combined with that for foods as the control in respect of the latter should be provincial in view of the varying needs of the different Provinces.

Legislation may consist of either a combined Drugs and Pharmacy Act, or a separate Drugs Act and a separate Pharmacy Act.

"ADULTERATION DEFINED

The Committee dealing with British Pharmacopoeial Drugs and known and approved medicines defines 'Adulteration' on the lines of section 3 (2) of the Calcutta Municipal Act, 1923 and "Misbranding" as in section 3 (42) of the said Act

CENTRAL LABORATORY

The Committee recommends that a Central Laboratory should be established and maintained by the Governor-General in Council. It may be located either at Bombay or at Calcutta. The Laboratory should consist of two departments, (1) Pharmacology and Bio-Chemistry and (2) Chemistry and Pharmacy.

The functions of the Central Laboratory will be to do research work on the Pharmacological testing of drugs; to train public analysts in the methods of chemical, bio-chemical and biological assay; to undertake commercial testing of drugs for manufacturers and dealers on payment of the prescribed fees, particularly for those who are unable to set up their own laboratories for the testing of their products; and to assay and test chemicals, drugs, biological products and organometallic compounds on request by any person including Local Government, Provincial Laboratories or Inspectors.

Every Local Government should establish and maintain a testing laboratory in the Province incharge of a Public Analyst subject to the approval of the Governor-General in Council.

SPURIOUS DRUGS

Recommendations for Checking Sale

The sale, manufacture, or storage for sale of adulterated, misbranded or unwholesome drugs may be prohibited.

Punishments for the offences by way of fine, imprisonment and confiscation should be adequate and deterrent, second and subsequent offences being treated with progressive severity.

Every manufacturer, importer and retail dealer of drugs and medicines should be required to take out an annual licence as prescribed.

Purchasers, manufacturers and dealers also should be permitted to get samples analysed by Public Analysts.

PROFESSION OF PHARMACY

As regards the profession of Pharmacy, the report says no person should be eligible for registration as a pharmacist unless he has (A) successfully undergone a course of training as laid down by the General Council of Pharmacy : or (B) taken the degree of a Pharmaceutical Chemist of an Indian University,

Any person may be registered as a pharmacist without further training or qualifying examination who is (A) a duly qualified medical practitioner, registered or recognised, by the Provincial Council of Medical Registration or by the General Medical Council of the United Kingdom : or (B) a holder of a British, American or Foreign degree in pharmacy ; or (C) a holder of a diploma of the Pharmaceutical Society of Great Britain ; or (D) a holder of a degree in science of an Indian University with evidence of sufficient training in Pharmaceutical Chemistry.

Any person may be registered as a pharmacist until the expiration of a period of five years from the date of the passing of this Act, (A) if he has successfully undergone the course of 'Chemist and Druggist' of the Madras Medical College, or (B) if he has obtained compounder's certificate from the State Medical Faculty, Bengal, after undergoing the revised course of training instituted in July 1923 ; or (C) if he is a qualified compounder and has been actively engaged in dispensing work for a period of not less than three years, or (D) if he has been actively engaged in dispensing work without qualification for the preceding five years.

Provision should be made to institute a degree in Pharmaceutical Chemistry in the different Universities in India. Persons taking such degree will be eligible for registration as pharmacists.

No registration is necessary in the case of (a) persons selling drugs and chemicals in the ordinary course or wholesale dealing : (b) persons selling drugs and chemicals in unbroken packages and (c) persons selling useful household remedies prescribed by the Governor-General in Council.

PATENT MEDICINES.

The report next refers to Patent and Proprietary medicines and says every patent and proprietary medicine with a 'secret formula' manufactured in India or imported into India should be required to be registered on payment of a prescribed fee and a certificate of registration obtained for it, on the lines of the Patent and Proprietary Medicine Act of Canada. The certificate will be issued only on the disclosure of each medicinal ingredient to the department concerned. If alcohol in excess of 5 per cent. is present, the name and proportion of each ingredient which medicates the preparation so as to unfit it for use as an alcoholic beverage should be given to the department. If the medicine contains any of the specified (namely those mentioned in the schedule to the Patent and Proprietary Medicine Act of Canada) drugs, the proportions of the ingredients should be given to the department and also mentioned on the label.

If the medicines are found to be harmful or of a bogus nature, the Governor-General in Council in consultation with the Advisory Board should be empowered to prohibit their use. The manufacturer or importer should also be punished and the stocks forfeited.

NO OPIUM AND COCAINE.

The use of opium and its derivatives in medicines for internal use and cocaine and its salts in any medicine, whether for internal or external use, should be prohibited.

Drugs must be designated by their commonly used names. The provisions for inspection, seizure etc. of other drugs and chemicals should be made applicable to a patent and proprietary medicines.

CHECKING FRAUD

The author or the person responsible for the publication of fraudulent advertisements regarding patent and proprietary medicines and the printer and the publisher should be punished. Advertisements relating to aphrodisiacs, venereal diseases, remedies for maladies of women, cures for cancer, leprosy and tuberculosis should be prohibited. No false, misleading or exaggerated claim should be permitted to be made on labels, wrappers or advertisements. The general control of advertisements in other respects should be left to be prescribed by rules made by the Governor-General in Council.

Imported patent and proprietary medicines with secret formulae should, in addition to existing customs duties, bear a special duty of 20 per cent. ad valorem. Medicines with secret formulae manufactured in India should bear a revenue stamp of four annas on each rupee of its market value. Proprietary remedies with disclosed formulae should be subject to the following restrictions :—(a) The name should reflect

the composition of the product and not its clinical use ; (b) The provisions as to advertisements and the other provisions of a general nature relating to patent medicines with secret formulae should apply to these also ; (c) The formulae should be exhibited on the label of the actual container—if a simple chemical substance, the scientific name and chemical formulae ; if a mixture, details of composition. .

INDIGENOUS REMEDIES

As regards medicines made from indigenous drugs the report says the crude single drugs as well as the compounded medicines used in the indigenous system of treatment should be brought under control. The introduction of a uniform curriculum for the instruction and training of indigenous practitioners should precede the exercise of any system of control. The practice of Indian medicine should be restricted to properly trained, qualified and registered practitioners.

INDIAN DRUG INDUSTRY

Recommendations For Development

The report next urges the development of drug industry in India. It says that the Universities in India should be required to give training in advanced Pharmaceutical Chemistry and institute a degree on the subject. The quality of crude drugs, both imported and grown in the country, should be strictly controlled. The import duty on manufactured drugs should be increased by five per cent. The import duty on crude drugs not available in India should be abolished or appreciably reduced. The imposition of export duty on raw materials obtainable only in India should be considered.

The Excise regulations should be modified so as to remove the hardships referred to in Chapter I of section four and they should generally be worked in a sympathetic spirit.

The question of reduction of railway freights on raw materials and indigenous drugs manufactured in India should be encouraged by the Government by the purchase of the required supplies of medical preparations, surgical dressings, chemicals etc. from Indian manufacturers as far as possible.

INDIAN PHARMACOPOEIA.

The Committee next recommends that steps should be taken to compile an Indian Pharmacopœia without delay. This work should be on the lines of the British and United States Pharmacopœias, including only drugs of known composition, of definite pharmacological action, of well-established therapeutic properties, with the toxicity fully worked out and the necessary standard of chemical and biological assay for determining the safe maximum doses.

QUININE POLICY.

Finally the report deals with Quinine policy and says that the position with regard to the utility of the alkaloids of cinchona bark other than quinine in the prophylaxis and treatment of malaria should be clearly defined. The Cinchona Department should cultivate the species of cinchona best suited to the Indian climate on a sufficiently large scale, to make India self-supporting with regard to the alkaloids and at prices commensurate with the economic condition of the Indian people. With a view to extend the cultivation of cinchona in India, experiments should be carried out in the growing of different varieties on a small scale in various areas, close connection between the field and the laboratory being maintained.—“Associated Press.”

Reviews and Notices of Books

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HEALTH SPECIAL NUMBER, JANUARY 1932.

The Editors and Proprietors of 'HEALTH' the well-known Drs. U. Rama Rau and U. Krishna Rao of Madras have brought forward a Special Number of 'HEALTH' as a souvenir, on the occasion of the journal reaching its decennium on the 1st of January 1932. It contains many interesting articles on Health, Maternal, Infant and Child welfare and Diseases from the pens of experts and is illustrated. The frontispiece exhibits a dance pose in costume by Mr. E. Krishna Iyer, B.A., B.L., Advocate, Madras, representing the dance of Lord Nataraja over the joy of creation of the Universe, where land is symbolized by the mud pot and water by the plate containing it. The articles on Health, by the Chief of Aundh, the chief exponent of the Suryanamaskar exercises; by Sri Yogendra, on yoga as a means of rejuvenation; by Dr. Podolsky on singing as the best way open for the attainment of perfect health and by Mr. E. Krishna Iyer on Dancing, as an art and an aid to Health, are really illuminating and worth perusal. Dr. Ragunatha Rao's article reveals the hidden treasures of Health in our ancient Hindu scriptures while that of Professor Madhava, will interest Life Insurance Companies and their growing clientele in India. The article on 'The Supremacy of Motherhood' by Dr. (Mrs.) Anna Thomas and that on Infant feeding, by Drs. Jaharlal Das and Saxena have put the case for the protection and preservation of mothers and infants in this unhappy land of high maternal and infantile mortality in as clear and forcible a language as possible. The article on Myopia by Dr. Raghbir Saran Agrawal and that on Tonsils by Dr. Sanjivi Rao must open the eyes of the School-going population and

their parents and teachers, as to the imminent need for rectifying these defects, which are wide-spread. On the side of diseases, Mental Disease which is the prime cause of all bodily diseases has been ably dealt with by Dr. Frank Noronha. Among the bodily diseases, the first rank is now held by Consumption, and Dr. Kesava[†] Pai, an expert on Tuberculosis, has written a lucid article on the subject. The last article is on Goat's Milk, Gandhiji's Principal diet, by Dr. T. S. Tirumurti. The importance of Goat's milk to young and old, the healthy and diseased, has been clearly brought home to the readers by this article. There is no doubt this Special number will serve as a valuable book of reference and every household should possess it. The journal, though nearly treble the size of the ordinary one, is valued at only double its price. Copies can be had also in Tamil, Telugu and Kanarese for the same price viz, annas four, (to non-subscribers) from the publishers, 323, Thambu Chetty Street, Madras.

Medical News and Notes.

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OBJECTIONS TO INTERPRETATION OF धमनी IN सुश्रुत, AS A CEREBROSPINAL NERVE.

(By M. V. Apte, B. Sc., M. B. B. S.)

1. The scope of Susrutian surgery is not such as to necessarily imply the knowledge of nerves.

2. There is no evidence that Susruta possessed the necessary data for establishing the *functions* of sensory, motor, and especially sympathetic nerves as at present understood and as assumed by our worthy opponents

3. The principles of Susrutian physiology as disclosed in सूत्रस्थान 14 and 21 distinctly show that the author attributed the function of subserving sensations and motions to the *blood*. It is in conformity with this that in शरीर 7 and 9 the same functions are given to सिरास and धमनीस.

4. The hypothesis that the blood subserves sensations and motions is not so ridiculous as the modern शास्त्री believes. We need only turn our attention to the chemical stimuli to functional activity that the so-called hormones are believed to supply to almost every functioning unit of the body. It is proved beyond doubt that the chief stimulus that the heart-muscle receives is from certain salts of the blood ; and we have every reason to believe that a similar stimulus is given to the whole vascular system by the salts of the blood. (I should not be surprised if a half modernized शास्त्री equates the विदीपास to these constituents of the blood.) This proves that the idea of the blood being the activator of

tissues is not *in itself* unjustifiable. On the other hand when the facts about circulation were just beginning to be realized such a hypothesis is most *natural* and perfectly *scientific*.

5 The idea that the धमनीs convey the product of digestion, the रस (as part of the blood) to the tissues is expressed in सूत्र 14 and शरीर 4. In शरीर 7 the opening sentence introduces the idea that शिराs drain the tissues.

6. The स्रोतसs denote hypothetical paths which join the abodes of gaseous, liquid and solid food to the tissues and the tissues in turn to the outlet of waste-matter. This is an indication that the vascular connection between these parts was not then minutely followed and only the bigger superficial blood-vessels were all that were actually seen. References to the mechanism of urine-formation in अश्मरीनिदान support the same view. It is there held that thousands of स्रोतसs bring urine to the bladder from the पक्वाशय. In वृद्धिनिदान the hydrocele fluid is said to be urine. A similar view is found expressed in उदरनिदान. This shows that the dissections then carried out did not disclose the ureters or such other structures. The स्रोतसs are held to be joined to the धमनीs and are described along with them in शरीर 9. If धमनीs be nerves there is *no propriety* in grouping them with the स्रोतसs.

7. The reference to नामि as the root of शिराs and धमनीs is justifiable on the ground that the whole of शरीर is written with a constant eye upon the evolution of the fetus, a reference to which is found in almost every chapter of शरीर.

8. If शिराs include sympathetic nerves, arteries, veins, and lymphatics their grouping together is *without any sense*, the more so when other nerves are separately classed as धमनीs and when venesection is styled as शिराव्यध.

9. The lack of means and paucity of information is *no discredit* to any scientific investigator. But the lack of a sense of propriety and scientific accuracy, as the contrary view implies, certainly lowers the value of any scientific work.

10. The merits of Susruta are : (i) his advocacy of surgery as a mode of treatment on the विदोष basis ; (ii) his emphasis on the study of Anatomy ; and above all (iii) his *originating* a method for anatomical investigation. We cannot blame an investigator for not perfecting a method he originates. That is the duty of his followers.

THE COMPOSITION OF THE EARTH.

This earth, on whose surface we live, says Dr. L. H. Adams, of the Geophysical Laboratory of the Carnegie Institute, is made up almost entirely of four elements, iron, magnesium, silicon and oxygen, the

remaining eighty-eight elements being confined to the thin film called the crust. Directly beneath the relatively thin layer of sedimentary rocks at the surface, there is a first layer of granite ten miles thick, below that a twenty-mile layer of basaltic rock. Two thousand miles of peridotite rock, consisting of iron magnesium silicate, come next, and the central core of 4,000 miles diameter is formed of metallic iron with a little nickel.

Earthquake waves gave the clue to the secret of the earth's composition. Earthquakes of any considerable magnitude produce waves, some of which travel along the surface of the earth, while others pass through it. By measuring the acceleration and retardation of these waves on passing through the earth at various depths, it is possible to judge what sort of rocks and minerals intervene. According to its elasticity, each different kind of rock has a different effect on the speed of waves passing through it, and so the kind of strata traversed may be judged.

GERMICIDAL PROPERTIES IN SOAPS.

Some soaps, such as the oleate and bromo-palmitate are among the most powerful and rapid germicides known, and certain soaps may play an important part in the body defence against bacteria, as they have a selective germicidal action. Dr. A. H. Eggerth describes in the January number of the *Journal of Experimental Medicine* the result of a series of tests he has carried out on sulphur-bearing soaps, the a-mercapto and the a-disulpho varieties. These he found to possess a powerful and markedly selective germicidal action. In the mercapto series, those with 12 and 14 carbonatoms were the most germicidal; in the disulpho series, the dicaprinate, dilaurate, and dimyristate were the most powerful. The optimum number of carbon atoms varied with the test organism and number of carbon atoms in the molecule markedly influences the germicidal action of soaps. Two main factors determine this action: the ability of the soap to make its way into the bacterial cell and its toxic action on the bacterial protoplasm after it has penetrated. As the number of carbon atoms in the soap molecule increase the toxicity becomes greater, but the penetrative power diminishes. So long as molecular size does not prevent entrance of the soap into the cell, germicidal action will increase with the molecular weight. Eventually a point is reached where molecular size prevents all entry and germicidal action is diminished.

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Some recent advances regarding fevers

Modern Medicine is slowly recognizing the fact that *Fever and rise of body temperature are not always Synonymous*. "Fevers", says Prof Friedr Kevacs, (Die Auzti Praxis, Oct. 15, 1930) "arises from certain disturbances in the entire metabolism, of which increase of body temperature is one of the symptoms. *There are Fevers where increase of body temperature need not even be present*, for the degree of rise of temperature depends on irritation of the system controlling heat regulation. In some people we at times observe hyperpyretic temperature without serious general Fever Symptoms (Symptoms of toxæmia etc.). In others, there are serious general fever symptoms without any rise of temperature."

Clinically therefore fevers may be of three kinds :—

- (i) In which there is rise of temperature without general fever symptoms.
- (ii) In which there are general fever symptoms without any rise of temperature. In some cases the temperature is even subnormal.
- (iii) In which besides the general fever symptoms there is rise of temperature.

There are two theories of fever :

1. *Nurogenic theory*—The fever toxin directly upsets the heat-regulating apparatus in the brain and upsetting of the body-metabolism may or may not occur.

The recent idea seems to be that *in fevers where there is no upsetting of the body-metabolism, it should be considered as physiological and not phathological*.

2. *Metabolic theory*.—The fever toxin upsets the body-metabolism and the external (fever toxin) or internal (defective metabolism toxin) toxin upsets the heat regulating apparatus. In the latter case this upsetting of the heat regulating centre is secondary.

Accordingly all pathological fevers result from primary upsetting of the body metabolism and secondarily of the heat-regulating apparatus when there is high temperature.

In the first theory the heat-regulating centres are primarily affected and there is secondary upsetting of the body metabolism.

In a previous article it has been shown how the two modern theories are being reconciled in Ayurved. When "Vayu" alone is upset the fever is ephemeral and often Physiological unless either of the two aspects of metabolism ("Pitta and Kapha") are secondarily involved when the fever is pathological. Conversely when fever is due to upsetting of metabolism ("Pitta or Kapha") primarily, unless the "Vayu" is upset, there cannot be any deviation from normal temperature. What modern medicine is attempting viz. trying to reconcile the two theories of the causation of fever, Ayurved in its *Tridosh theory* had done so long ago.

Western medicine up till now defines fever as associated with rise of temperature. It is the very recent idea that fever and rise of temperature are not synonymous, but this clinical fact is known to Ayurvedists, high and low, from very ancient times. When during the course of treatment the rise of temperature is suppressed by anti-febrile drugs but the patient does not feel well, it is common for Ayurvedists to feel the pulse and say that "*Fever is present in the Nadi*" which statement explains why the patient is not feeling well in spite of normal temperature. Homeœpaths also lay considerable stress on the fact that one should not suppress a leading symptom like the rise of temperature when the

associated symptoms of fever do not disappear with the temperature.

Some Fevers are considered physiological like Febris Nenatorum which sometimes appear in the first week of life or dynamic hyperthermia after excessive albumen feeding (which is "Pitta" and not fever says Ayurveda) or of increase of temperature in thirst after heavy work like riding long distances, staying in over-heated places etc. ("Vayu" upset only).

Lastly "Vayu-Kapha" fevers sometimes produce subnormal temperature, says Ayurved. As example may be stated the subnormal temperature of syphilis of the Liver, of latent hyper-thyriotoxicosis. "Vayu-Kapha" fevers sometimes produce irregular temperature e.g. associated with tumours (benign or malignant). These cases are however pathological.

All these prove the contention that Ayurved is a rich mine of clinical knowledge which the modern West can study with advantage to get new ideas, of which they have no conception at all. Conversely it proves that modern medical knowledge explains more satisfactorily many an idea of Ayurved which appear puzzling and is difficult to explain. It behoves us, therefore, of whatever school we belong to, to make a comparative study of both Ayurved and modern western medicine for the relief of suffering humanity.

A. T. R.

Original Articles

MIDWIFERY IN ANCIENT INDIA

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.

Calcutta.

VIII

THE WET-NURSE

If the services of a wet-nurse be required, then you should select one who is middle-aged, good natured, quiet, non-avaricious, and of medium size. She should have breasts full of milk, abundant in quantity and pure in quality; the nipples must not be hanging very low down, nor be pointing upwards. If possible she should belong to the same caste as that of the mother. She must belong to some noble family, should have her children living, and must be fond of the baby whom she is to nurse. She must be healthy in appearance, well-qualified, her upper lip must not be prominent, and she must not practise any mean work, nor be too fond of play. Such a nurse is to be engaged to promote health and strength of the child.

If the nipple be straight and point upwards, the mouth of the child becomes widened; if the nipple be pendulous, there is danger of suffocation and even death of the child, for the breast may press over the nasal orifices and the mouth of the child. Then on a propitious day, the nurse, after having bathed and cleanly dressed, is to sit facing towards the east with the child in her lap, its head pointing towards the north. She should then wash her right breast, press a little milk out, then utter the following *mantras* and suckle the baby. The *mantra* is: "O Fortunate! let the four seas supply milk constantly to your breast. O Good faced! as the Devas became long-lived by drinking the nectar, so let the child live long by sucking your breast." This is necessary, otherwise the boy may suffer from diseases, as the milk of the wet nurse is not the natural food of the baby. The first flow of the milk is to be thrown away, for, the breasts being too full of milk, a larger

quantity of milk enters into the œsophagus of the baby at once, and the baby may suffer from cough, dyspepsia and vomiting. Therefore, whenever she would suckle the baby, she must throw away the first part of her breast-milk.

She must be of cheerful mind when suckling the child, for milk is secreted inadequately if she be angry, or sorry, or unaffectionate towards the baby. She must take wholesome diet during the period of her service. She may take wheat, *sali* rice, raw-meat juice, wine, jujube, sesame paste, garlic, fish, *Kaseruka* (*Scirpus kysoor*), *Srngataka* (*Trapa bispinosa*), *Visa* (stalk of *Nelumbium speciosum*), *Vidarikanda* (root of *Ipomœa digitata*), *Madhuka* (*Bassia latifolia*), *Satuvani* (*Asparagus racemosus*), *Nalika* (a sweet smelling substance), *Kalasaka* (*Corchorus capsularis*), *Alabu* (*Iagenaria vulgani*), *kalami herb* (*Ipomœa aquatica*), etc.

तत यथावर्णं धात्रीमुपेयान्मध्यमप्रमाणां मध्यमवयसमरोगां शीलवती-
मचपलामलोलुपामकृशामस्थूनां प्रसन्नचौरामलम्बोष्ठोमलम्बोर्द्धस्तनीम-
व्यङ्गमव्यसनिनीं जीवदत्तां दोग्धीं वत्सलामक्षुद्रकर्मिणीं कुले जाता-
मतोभूयिष्ठैश्च गुणैरन्वितां श्यामामारोग्यबलवृद्धये वालस्य । ततोर्द्धस्तनो
करालं कुर्यात् । लम्बस्तनो नासिकामुखं द्वादयित्वा मरणमापादयेत् ।
ततः प्रशस्तायां तिथौ शिरःस्नातमद्वैतवाससं मुदङ्मुखं शिशुमुपवेश्य
धात्रीं प्राङ्मुखीमुपवेश्य दक्षिणंस्तनं धीतमौषत् परिस्रुतमभिमन्त्र्य
मन्त्रेणानेन पाययेत् ।

चत्वारः सागरास्तुभ्यं स्तनयोः क्षीरवाहिणः ।

भवन्तु सुभगे नित्यं बालस्य बलवृद्धये ॥

पयोऽमृतसं पीत्वा कूमारस्ते शुभानने ।

दोर्धमायुरवाप्नातु देवाः प्रश्यामृतं यथा ॥

अतोऽन्यथा नानास्तन्योपयोगस्यास्यात्मग्राह्याधिजन्य भवति ।
अपरिस्रुतेऽप्यतिस्तब्धस्तन्यपूर्णस्तनपानादुत्सृष्टितस्तोतसः शिशोः
काशश्वासवमीप्रादुर्भावः । तस्मादेवं विधानं स्तन्यं न पाययेत् ।

क्रोधशोकावात्सल्यादिभिश्च स्त्रियाः स्तन्यनागोभवति । अथास्याः
क्षीरजननार्थं सौमनस्यमुत्पाद्य यवगोधूमशालिषष्टिकमांसरससुराक्षौ-
वीरकपिण्या कलशुनमत्स्य कशेरु कशृङ्गाटकविसविदारिकन्दमधुकशतावरीन-
लिकालावूकालशाकप्रभृतिनि विदध्यात् ।

Susruta Samhita, IV. x.

Suckling is contraindicated if she be hungry, sad, tired, unwell, indisposed, pregnant, very weak, too fat, or attacked with fever; also after meal of profuse acid foods and unwholesome dietary. Indigestion in the baby should be carefully guarded against, and if it occurs, medicines should be given to the child, for slight indigestion may set up severe form of diarrhœa.

If by heavy meal or bad food, any *dosa* becomes eccentric in the nurse's system, her milk suffers from the same cause. The milk in her breast becomes polluted by bad food, improper habit or by the eccentricity of any of the *dosas* in her body. The child fed on such a milk becomes sick. An experienced physician must bear this fact in mind.

नच क्षुधित शोकार्त्तशान्तप्रदुष्टधातुगर्भिणी ज्वरितातिक्षीणातिस्थूल-
विदग्धभक्ष्यविरुद्धाहारतर्पितायाः स्तन्यं पाययेन्नाजीर्णेष्वपि वान्
दोषौषधमलानां सान्नवेगोत्पत्तिभयात् ।

भवन्ति चात्र ।

धात्रास्तु गुरुभिर्भोज्यैर्ज्विषमैर्दोषहेस्तथा ।

दोषा देहे प्रकुप्यन्ति ततः स्तन्यं प्रदुष्यति ॥

मिथ्याहारविहारिण्या दुष्टा वातादयः स्त्रियाः ।

दूषयन्ति पयसे न शरीरा व्याधयः शिशाः ॥

Susruta Samhita, IV. x.

In the *Mahavyutpatti*, a Sanskrit-Tibetan-English Vocabulary by A. Csoma de Koros, Edited by Ross and Vidyabhusana, Pub. by the Asiatic Society of Bengal. Vol. IV. No. 1, Part I. p. 79, we find the names of four kinds of nurses.—

1. Ankadhatri. —A nurse that holds and carries a child in her bosom.
2. Ksiradhatri. —A nurse that suckles the child.
3. Maladhatri. —A nurse that cleanses the child.
4. Krdanikadhatri.—A nurse that playas with the child.

In the *Mrechakatika*, we find an example of the fourth kind of nurse, who was trying to soothe the son of Carudatta with a clay cart as the boy was pressing for his gold cart which he had before, when Basantaseua, the heroine of the play, appeared on the scene suddenly. When Lord Kṛṣṇa went to forest in search of the Syamantaka diamond, he entered the cave of King Jamvovana, and there he found a nurse playing with the son of Jamvovana with the Syamantaka diamond, which he recovered after killing his father.

Jasoda acted as the Ksiradhatri to Srikr̥ṣṇa as his own mother Devaki was in prison. A nurse for suckling the child is generally required when the mother of the child dies after its delivery or when she is incapable of suckling the child herself. Raka, Sinivali, Gangu, Sarasvati were midwives and they were known as Dhatri. The method of suckling the child is an art which is unknown to many mothers. The ancient and the ideal method is found in the "Mother and the Child engravings" so commonly found in India; the *Sadyajata* form of Siva suckles the breast of Parvati, as narrated in the Linga Purana. A maladhatri is a maid servant who keeps the body of the child clean. The way of holding and carrying a child is the work of the Anka dhatri.

The Child-Life.—

In the *Av. vi.* 140, the cutting of the teeth of the child is described as a solemn occasion. The two upper teeth of the child appear first; and in the *Kaus. Br.* 46, 43-46, they are advised to be taught to bite rice, barley bean, sesame; and both the child and its parents are made to eat of the grains after they have been boiled in consecrated water.

The child learns to speak by the end of the first year of life (*Taitt. Sam.* vi. 1, 6, 7; *Sp.* vi. 4, 2, 38; xi. 1, 6, 3-5), the first words of a child's speech being generally the word "Tata" (*Att. Aran.* i. 3, 3).

A child tries to stand up at the end of a year (*Sp.* xi. 1, 6, 5.).

The child lives upon the mother's milk. In *Sp.* 5. 15-6 we read "Whenever the breasts of women and the udder of cattle swell, then whatever is born is born; and by restoring to the breasts of those who have milk, they continue to exist. And those who have no milk are nursed by the former as soon as they are born." Thus the services of a wet-nurse were required when mother's milk was scanty. Later on the child is fed with food; and the child grows vigorous by means of food" (*Sp.* ii. 2, 1, 11-12).

The behaviour of the child often discloses the nature of the child's ailment. If the disease be of the trunk and limbs, then the child becomes thirsty, and evinces signs of pain when handled by the nurse. If the disease be of the head, then the child fails to keep the head erect in its natural position. If the bladder be the seat of disease, the child would suffer from retention of urine, thirst and convulsion. If the digestive system be at fault, the child would suffer from constipation, retention of urine, flatulence,

borborygmi and change of colour of the body. If it be a constitutional disease from which the child suffers, the child simply cries constantly.

भवन्ति कुशनास्तांश्च भिषक् मस्य'ग्वभावयेत् ।

अङ्गप्रत्यङ्गदेशेतु रुजा यत्रास्य जायते ॥

मुहर्मुहः स्पृशति तं स्पृश्यमाने च रोदिति ।

निर्मालिताच्चा मूर्द्धस्ये गिरोरोगे न धारयेत् ॥

वस्त्रस्थे मूत्रसङ्घाती रुजा तृषप्रति मूर्च्छति ।

विण्म तमङ्गवैवर्ण्यच्छर्द्याधानान्त्वकूजनैः ॥

कोष्ठे दोषान् विजानीयात् सर्व्वत्रस्यांश्च रोदनैः ॥

Susruta Samhita, IV. x.

Tests of milk.—If the milk retains its white colour like thin, pure *sankha* or conch-shell when thrown on water, if it be adherent, if it does not lather, or if it be like thread, if it neither floats above nor dips completely down in the the water, it is said to be pure milk. Such milk helps the growth and increases the strength of the child.

अथास्याः स्तन्यमपसु परिक्षितं तच्चेच्छीतलममलं तनुं शङ्कावभा-
समपसु न्यस्तमेकीभावं गच्छत्यफेनिलमतन्तुमन्नोत्प्लवते न सीदति वा
तच्छुद्धमिति विद्यात्तेन कुमारस्यारोग्यं शरीरोपचयो बलवृद्धिश्च भवति ।

Susruta Samhita, IV. x.

THE CHILD.

After the expulsion of the placenta, the child is to be taken care of. It is recommended to rub and strike two pieces of stone near the child's ears, and to sprinkle cold and hot water alternately over the face of the child.

Such procedures often help to resuscitate the child when it faints due to the troubles of labour pain, and life of the baby returns, as it were to the apparently dead body. The child is to be slowly fanned with a fan of *kasa* grass, but you should be careful not to suffocate the child by blowing the fan forcibly. Besides these methods, other means must be tried to animate the child. Then when you find the baby all right, you should administer a bath in water, and the natural outlets of the child are to be cleaned. The nurse is recommended to pare the nail of her index finger short, and to have the finger well covered with cotton and then she

is to wipe out with it the palate, lips and the throat of the child. The anterior fontanelle is to be covered with cotton. You must prescribe salt and ghee to the baby so that it may vomit ; but as a rule emetics are contra-indicated in the case of children and pregnant women, unless urgently required.

तस्यास्त्वपरायाः प्रपतनार्थं खल्वेवमेव कर्मणि क्रियमाणे जातमात्रस्यैव कुमारस्य कार्याण्येतानि कर्माणि भवन्ति । तद्यथा । अश्मनोः संधट्टनं कर्णयोर्मूले । शीतोदकेनोष्णदकेन वा मुखपरिषेकः । तथा स क्लेशविहतान् प्राणान् पुनर्लभेत । कृष्णकपालिकासूर्पेण चैनमभिनिष्पृणीयुः । यद्यच्चेष्टं स्यद् यावत् प्राणानां प्रत्यागमनं तत्तत् सर्ज्यमेव कार्यम् ।

ततः प्रत्यागतप्राणं प्रकृतिभूतमभिसमीच्या स्नानीदकग्रहणाभ्यामुपपादयेत् । अथास्य ताल्वाष्ठकण्ठजिह्वामार्जनमारभेताङ्गुल्या सुपरिलिखित-नखया सुप्रक्षालितोपधानकार्पासपिचुमत्या । प्रथमं प्रमार्जितस्य चास्य शिरस्तालु कार्पासिकपिचुना स्नेहगर्भेन प्रतिसंकादयेत् । ततोऽस्यानन्तरं कार्यं सैन्धवोपहितेन सर्पिषा प्रच्छर्दनम् ॥

Caraka Samhita. IV. viii.

Then the navel cord is to be cut by means of a sharp knife of gold, or silver, or iron.

If signs of decomposition set in the cut surface of the cord, you should apply oil boiled with *Lodhra* (*Symplocos racemosa*), glycyrrhiza, *Priyangu* (*Aglaia Roxburghiana*), *Daruharidra* (*Berberis Asiatica*) paste on the raw surface ; or you may use the powder of these drugs mixed with oil on the navel. If the cord is not properly cut, the following complications may occur : (1) *Ayama* (long) (2) *Vvayama* (wide) (3) *Uttundita* (Elevated) (4) *Pindalika* (tumour-like) (5) *Vinamika* (margins raised and centre depressed) (6) *Vijrmbhika* (repeated enlargement) of the navel occurs. These complications may be mild or severe in their course. Prescribe medicines to cure *Vayu* and *Pitta* by rubbing oil and ghee, sprinkling medicines, and purifying the body.

ततः कल्पनं नाडाः । अतस्तस्याः कल्पनविधिसुपवेक्ष्यामः । नाभिवन्धनात् प्रभृति हित्वाष्टाङ्गुलमभिज्ञानं कृत्वा छेदनावकाशस्य द्वयोरन्तरयोः शनैर्गृह्णीत्वा तीक्ष्णेन रीक्षराजतायसानां छेदनामन्यतमेनोर्ध्वधत्त्रेण छेदयेत् । तामये सूत्रेणोपनिबध्य कण्ठे चास्य शिथिलमब-

सृजेत् । तस्य चेन्नाभिः पच्येत तां लोधुमधुकप्रियङ्गदारुहरिद्रा-
कल्कसिद्धेन तैलेनाभ्यज्यात् एषामिव तैलौषधानां चूर्णेनावचूर्णयेत् ।
इति नाडी कल्पनविधिरुक्तः सम्यक् ॥

असम्यकल्पने हि नाद्या आयामव्यायामोत्तुण्डितापिण्डलिका-
विनामिकाविजृम्भिकावाधेभ्यो भयम् ॥

तत्राविदाह्निभिर्वातपित्तप्रशमनैरभ्यङ्गोक्तादनपरिषेकैः सर्पिर्भिद्यो-
पक्रमेत गुरुलाघवमभिसमोक्ष्य कुमारस्य ॥

Caraka Samhita, IV. viii.

Before this, the ceremony of *Jatakarma* is to be performed. Then let the child suck honey and fresh ghee which have been purified by the *mantras*. The child is allowed to be suckled from the right breast of the mother. A vessel full of water should be kept near the head of the child.

अतीऽनन्तरम् जातकर्म्म कुमारस्य कार्यम् ॥ ततो मधुसर्पिषीमन्त्रो-
पमन्त्रिते यथान्नायं प्राशितुमस्मै दद्यात् । स्तनमत ऊर्ध्वमर्जनैव विधिना
दक्षिणं पातुं पुरस्तात् प्रयच्छेत् ॥ अथातः शीर्षतः स्थापयेदुदकुम्भं
मन्त्रोपमन्त्रितं ॥

Caraka Samhita, IV. viii.

The character of the offspring and the hereditary diseases depend upon the health, habit and the diseases of the parents :—

Parents.

Child.

- | | |
|--|--|
| 1. Habit of lying flat, with hands and legs asunder and walking during the night | Insannity. |
| 2. Quarrelsome ... | Epilepsy. |
| 3. Addicted to excessive venery ... | Deformed, shameless, hen-pecked |
| 4. Sorrowful ... | Fearful, weak, short-lived. |
| 5. Avaricious ... | Envious, hen-pecked, troublesome. |
| 6. Thief ... | Laborious, lazy, quarrelsome, wicked. |
| 7. Angry ... | Wicked, envious. |
| 8. Sleepy ... | Sleepy, foolish, with weak diges-
tive power. |
| 9. Drunkard ... | Thirsty, memory impaired, mind
unsettled. |

*Parents.**Child,*

10. Lover of Iguana flesh ...	Diabetic, calculi and urinary diseases.
11. „ of Boar-flesh ...	Red-eyed, coarse-haired, weak, short breath, snoring.
12. Fish and meat-eater ...	Staring eyes, closes eye-lids at long intervals.
13. Lover of sweet food ...	Urinary diseases, dumbness, obesity.
14. „ acid „ ...	<i>Raktapitta</i> , skin diseases and eye diseases.
15. „ salt „ ...	Contracted skin, grey hairs, baldness.
16. „ pungent „ ...	Sterility, weak scanty semen.
17. „ bitter „ ...	Thinly built, consumptive.
18. „ astringent „ ...	Dark complexion, retention of discharges such as urine and faeces.

विहृतशायिनी नक्तञ्चारिणी चोन्मत्तं जनयति । अपस्मारिणं पुनः कनिकलहशोला व्यवायशला दुर्वपुषमङ्गीकं स्त्रेणं वा । शकनित्या भौतमपचितमल्प युषं वा ॥

अभिध्यायिणी परोपतापिनमौषुर् स्त्रेणं वा । स्तेना त्वायासबहुलमतिद्रोहिणमकर्मशौलं वा । अमर्षिणी चण्डमौपधिकमसूयकं वा । स्वप्नित्या तन्द्रालुमबुधमल्पग्निं वा । मद्यनित्या पिपासालुमल्पस्मृतिमनवस्थितचित्तं वा । गोधामांसप्राया शर्करिणमश्मरिणं शनैर्मेहिणं वा । वराहमांसप्राया रक्ताक्षं क्रथनमतिपरुषरोमणं वा । मत्स्यमांसनित्या चिरनिमिषं स्तब्धक्षं वा । मधुरनित्या प्रमेहिणं सूक्ष्मतिष्ठूलं वा । अन्ननित्या रक्तपित्तिनं त्वगक्षिरोगिणं वा । लवणनित्या शौघवल्लीपलितं खालित्यरोगिणं वा । कटुकनित्या दुर्बलमल्पशुक्रमनपत्यं वा । तिक्तनित्या शोषिणमवलमनुपचितं वा । कषायनित्या श्यावमानाहिनमुदावर्तिनं वा । यद्यच्च यस्य यस्य व्याधिर्निदानमुक्तं तत् तदासेवमानान्तर्बन्धी तन्निमित्तविकारवहुलमेवापत्यं जनयति ॥ पितृनासु शुक्रदोषा मातृजैरपचारैर्व्याख्याताः ॥ इति गर्भोपघातकरा भावा व्याख्याताः ॥

Garaka Samhita, IV, viii.

After the ceremony of naming the child is over, the signs of long life are to be observed in the child. These signs are as follows :—

Hairs.—Soft, thin, separate, scanty, smooth, black and strong,
i. e. rooted firmly.

Skin.—Firm and thick.

Head.—Normally shaped but a little bigger, agreeable, and shaped like an umbrella.

Forehead.—Broad, strong, smooth, well-adapted joinings at the temples, half-moon shaped.

Ears.—Thick, the posterior surface plain and large, well-joined lobules, and large external auditory meatus.

Eyebrows.—Slightly elongated, well-joined, equal in size, large and united.

Eyes.—Equal, good power of vision, symmetrical, powerful, glaring, and normal in structure.

Nose.—Straight, long, long respiration, long bridge, end slightly bent or curved.

Mouth.—Large, well-formed mouth with a set of good teeth.

Tongue.—Long and broad, smooth, thin, normal and coloured pale red.

Palate.—Smooth, well-nourished, hot and red.

Voice.—High and loud, grave, not sorrowful, mild or sweet, calm and echoing.

Lips.—Neither very thick, nor very thin, wide, cover of the mouth, and red coloured.

Teeth.—Straight, well-set.

Jaws.—Large.

Neck.—Not very large or medium size.

Chest.—broad and well-formed.

Clavicles.—Deep set.

Spinal column.—Deep-set.

Inter-mammary region.—Broad.

Sides of the body.—Conform to the shoulders and are strong and firm.

Arms, buttocks, fingers.—Round, full, and long.

Hands, Feet.—Large, well-nourished.

Nails.—Strong, round, cold, copper-coloured, raised, and convex like the back bone of the tortoise.

Navel.—It has a whirl on the right side, margin raised, centre depressed.

Waist.—About the measure of the fourth part of the space between navel and chest, full, and well-nourished.

Buttocks—Round, firm, fleshy, neither too much raised, nor too much depressed.

Thigh.—Round, well-nourished.

Legs.—Neither too strong, nor too weak, like the legs of a deer.

Heel.—Neither round nor thin.

Feet.—Well-built and shaped like the carapace of the tortoise.

Besides these, urination, defaecation, expulsion of flatus, sleep, walking, conduct, laugh, crying, suckling should be natural. What is not mentioned here, should be natural and normal. If otherwise, the result may be injurious. Thus the signs of a long life are told.

कृते च नामकर्मणि कुमारं परीक्षितुमुपक्रमेतायुषे प्रमाणज्ञानहेतोः ।
तत्रेमान्ययुष्मतां कुमारानां लक्षणानि भवन्ति । तद्यथा । एकैकजा
मृदवोऽल्पाः स्निग्धाः सवस्मूलाः कृष्णाः केशाः प्रशस्यन्ते । स्थिरा बह्वक्ता
त्वक् । प्रकृत्याकृतिसुसम्पन्नमोषग्रमाणातिरिक्तमनुरूपमातपत्रोपमं शिरः ।
व्यूढं दृढं समं सुस्निग्धगङ्गसंध्युर्ध्वव्यञ्जनसंपन्नमुपचितं
बलिभमर्धचन्द्राकृति ललाटं । वहली विपुलसमपीठौ समौ नीचैर्वृद्धौ
पृष्ठतोऽवनतौ सुस्निग्धकर्णपुत्रकौ महाच्छिद्रौ कर्णौ । इषत्प्रखम्बिन्याव-
संगते समे संहते महत्यौ भ्रुवौ । समे समाहितदर्शने व्यक्तभागविभागे
बलवती तेजसोपपन्ने स्रज्जापाङ्गे चक्षुषी । ऋण्वी महोच्छ्वासा
वंशसंपन्नेषदवनताया नासिका । महदृजुसुनिविष्टदन्तमास्थम् ।
आयामविस्तारोपपन्ना श्लक्ष्णा तन्वी प्रकृतियुक्ता पाटलवर्णा जिह्वा । श्लक्ष्णं
युक्तोपचयमुष्णोपपन्नं रक्तं तालु । महानदोनः स्निग्धोऽनुनादी गम्भीर-
समुत्थो धीरः स्वरः । नातिस्थूलो नातिकृशो विस्तारोपपन्नावास्थ-
प्रच्छादनौ रक्तावोष्ठौ । महत्यौ जनु । वृत्ता नातिमहती श्रोत्रा ।
व्यूढमुपचितमुरः । गुढं कर्णु । पृष्ठवंशश्च । विप्रकृष्टान्तरी स्तनौ ।
अंसपातिनौ स्थिरे पार्श्वे । वृत्तपरिपूर्णायतौ वाहू । सकृन्धिनौ ।
चङ्गुलयश्च । महदुपचितं पाणिपादं । स्थिरा वृत्ताः स्निग्धास्तास्त्रासुङ्गा
कुर्माकाराः करजाः । प्रदक्षिणावर्ता सोत्सङ्गा च नाभिः । उरस्त्रिभागहीना
समा समुपचितमांसा कटी । वृत्ती स्थिरोपचितमांसी नात्युन्नतो नात्यवनतो
स्फिचौ । अनुपूर्वं वृत्तावुपचययुक्तावुरु । नात्युपचिते नात्यपचिते एणोपदे

प्रगूढसिगास्थिमधी ऋद्धे । नात्युपचितौ नात्युपचितौ गुन्फौ ।
 पूर्णपट्टिगुणौ पादौ कुर्माकारौ । प्रकृतियुक्तानि वातमूलपुण्ड्रगुह्यानि ।
 तथा स्वप्नजागरणायामस्मितरुदितस्तनग्रहणानि । यच्च किंचिदन्यदनुक्त-
 मस्ति तदपि सर्वं प्रकृतिसंपन्नमिष्टम् । विपरीतं पुनरनिष्टं ॥ इति
 दीर्घायुर्लक्षणानि ॥

Caraka Samhita. IV. viii.

The child is to be well-covered with silk clothes and should sleep in a silk beding. It should be fanned by the branches of *Pilu* (*Salvadora Persica*), *Vadari* (*Zizyphus jujuba*) and *Nimva* (*Melia azadirachta*) and *Parusaka* (*Grewia asiatica*), and put a piece of cloth or cotton well-soaked in oil over the child's head. Tie protective amulets on the child's hands, legs, head and neck, and spread a few grains of sesame, linseed and mustard over the bed. Keep a burning furnace in the room and observe the rules of a patient suffering from wound.

अथ बालं क्षीमपरिवृतं क्षीमः स्वास्तृतायां शय्यायां शययेत् ।
 पीलुवदरीनिम्बपरुषकशाखाभिश्चैनं वीजयेत् । मूद्भिर्चास्याहरः स्तौ-
 लपिचुमववारयेत् । धूपैश्चैनं रक्षोघ्नैर्धूपैः । रक्षोघ्नान् चास्य
 पाणिपादशिरोग्रोवास्त्रयसृजेत् तिलातसीमर्षपकणांश्चात्र प्रकिरेत् ।
 अधिष्ठाने चाग्निं प्रज्वालयेत् । व्रणितोपासनोद्यच्चावेक्षेत ।

Susruta Samhita IV. x.

On the tenth day, after offering words of good will, the patient may fix any name for the child, according to their own will, or after some star of its nativity.

ततोऽश्मेऽहनि मातापितरौ कृतमङ्गलकौतुको स्वस्तिवाचनं कृत्वा
 नाम कुर्यातां यदभिप्रेतं नक्षत्रेण वा ॥

The Child's toys—A variety of toys to please the child should be at hand. These should be light, beautiful, and musical, and must not be sharp pointed or otherwise, for it may be pushed inside the mouth of the child and may cause death of the baby. These should not cause fear by their unnatural shape or sound. On no account should a child be terrified. If the baby refuses food or cries, or disobeys orders, the practice of terrifying the child by the narration of stories of Rakhasa, Pisacas, ghosts and other super-natural beings be deprecated.

क्रीडनकानि खलु कुमारस्य विचित्राणि घोषयन्ति चाभिरामाणि
चागुरुणि चातीक्ष्णाग्राणि चानास्यप्रवेशीनि चाप्राणहराणि चावित्रासनानि
स्युः । न ह्यस्य विवासनं साधु । तस्मात् तस्मिन् रुदत्यभुञ्जाने वान्यत्र
विधेयतामगच्छति राक्षसपिशाचपूतनाद्यानां नामान्यद्वयता कुमारस्य
विवासनार्थं नामग्रहणं न कार्यं स्यात् ॥

Caraka Samhita, IV. viii.

The proper age of marriage —When the boy reaches the age for learning, he should be educated according as he is a Brahmana, or Ksatriya, or Vaisya, or a Sudra. At the age of 25 years, the boy should be married to a girl of 12 years, for then only will the offspring resemble the father in religion, worldly acquirements and martial activity. If a girl aged below 16 years becomes pregnant, her husband being less than 25 years of age, then the foetus dies in uterus. If it is delivered alive, it becomes short-lived; and if it lives long, he becomes weak bodily and mentally. Therefore you should be careful not to allow young girls to conceive, nor should you allow the old women, sick women suffering from chronic diseases, or women who are placed in similar abnormal conditions to conceive. The man should in similar circumstances refrain from procreating children.

शक्तिमन्तञ्चैनं ज्ञात्वा यथावर्णं विद्यां ग्राहयेत् । अथास्मै पञ्चविंशति-
वर्षाय द्वादशवर्षी पत्निमावहेत् पितृधर्मार्थं कामप्रजाः प्राप्स्यतीति ।

उनघोडशवर्षायामप्राप्तः पञ्चविंशतिम् ।

यद्याधत्ते पुमान् गर्भं कुक्षिस्थः स बिपद्यते ॥

जातो वा न चिरं जीवेज्जीवेद्वा दुर्बलेन्द्रियः ।

तस्मादत्यन्तवालायां गर्भाधानं न कारयेत् ॥

अतिवृद्धायां दीर्यरोगिण्यामन्येन वा विकारिणीपसृष्टायां गर्भाधानं
नैव कुर्वीति । पुरुषस्याप्येवंविधस्य त एव दोषाः सम्भवन्ति ।

Susruta Samhita IV. x.

(To be continued).

DRUGS OF ANIMAL ORIGIN, ANCIENT AND MODERN

BY

N. B. DUTT,

Calcutta.

There is no doubt that during the dawn of human civilization a far larger number of animal substances were used as remedies for human ailments than at present. This is seen in the indigenous systems of medicine of many countries. There are not a few animal drugs in Ayurveda or Hindu Medicine although some of them fell into disuse at a later time. But perhaps the people who use the largest number of animal substances as drugs are the Chinese. The European medicos of the middle ages advocated the use of a number of animal substances some of which are to be found in the modern British and Continental pharmacopoeias.

One of the lowest class of animals that have contributed to the healing of human diseases is *Annulosa* comprising the worms and insects. The employment of leeches for taking out blood is very ancient. Formerly the Chinese were in the habit of using earth-worms with honey for gastritis and juicy centipedes for children's diseases. Among the insect products honey and wax have been used in preparing or administering medicines from time immemorial. Special kinds of honey *e.g.*, Lotus honey of Kashmir and Orange honey of Sylhet and Khassia Hills enjoy good reputation as specific in certain kinds of eye-diseases. The blistering flies of the genera *Mylabris* and *Cantharis*, which are crop-pests in certain parts of India, possess important medicinal properties. One of their uses being as stimulant for the growth of hair. The well-known colour, carmine, that imparts such beautiful red tint to pharmaceutical preparations is obtained from the pregnant females of the Cochineal insect. The troublesome domestic pest, cockroach, is recognised in some systems of medicine as a valuable remedy in Asthma. In the drugmarket there are occasional demands for dried cockroaches. Spiders' cobweb is still considered by medical men as one of the most effective agents for stopping bleeding. The vicious red ant that

inhabitant certain trees is one of the sources of formic acid although this irritant substance is now prepared commercially by a synthetic process.

Fish oil has been used in medicine from time immemorial both internally and externally. Cod Liver oil is the best known among such oils. There are however other fish oils which are therapeutically as efficacious as cod liver oil. In Australia a small fish (*Theichthys pacificus*) is utilised for this purpose. In India too the oil derived from shark liver was used in the place of cod liver oil when the latter was not so common in the market. Many kinds of fish yield gelatine which is so much used in coating pills. The amphibians, toad and frog, have also their use in medicine. The active principle, phynin, is obtained from the glandular secretion and dried skin of toad and is similar to digitalin in its effects; while an extract of frog has long enjoyed the reputation of being a remedy for insanity. It is interesting to note that in ancient Egypt at king Tut's time fashionable people paid large sums to the priests for a beauty-preparation which consisted of equal parts of portions of crocodile, snake, cat, ibex, hippopotamus and horse. The venoms of the rattle-snake and cobra are used medicinally in America and India respectively, especially in epilepsy and certain kinds of fevers with severe brain-complaints. Speaking of epilepsy it was considered to be a mysterious disease and remedies for it were equally queer. For instance, a 10th century cure for this affliction was an oil made of hard-boiled eggs mixed with the oil extracted from the skull of an unburied man. Live lizards are sometimes seen in country drug-shop. In the Unani systems of medicine both lizards and tortoises are employed in the treatment of diseases.

Among the birds none has perhaps contributed more to the diet and medicine of the human race than the humble hen. We get albumen and lecithin from the eggs, the former of which has also commercial uses. The dried and powdered gizzards of the fowl aid digestion just like pepsin and is much used in China in the treatment of chronic gastric disorders. In Hindu medicine meat of various birds has been directed to be taken in particular diseases. Peacock's fat is said to be very efficacious in rheumatism and paralysis. There is a common belief among the Indians that sparrow's meat is a cure for impotency. In the preparations of medicated wines the flesh of some birds is added to the mash to be distilled by both Hakims and Kavirajes.

Man is better acquainted with the mammals than any other class of animals. A few quadrupeds have been his companions from the very earliest times. Naturally some of his medicines have been derived from the domestic animals. The most useful of such animals is, of course, the cow ; it not only gives milk on which almost everybody has to depend in his infancy, but also yields a number of other products *e. g.*, rennet, small-pox vaccines, tuberculin, beef-extract, parathyroids etc.

We need not mention here the large variety of products derived from milk which are both medicinally and industrially used. The ox gives pancreatine and ox-gall. The pig is only next in importance to the cow ; lard is used for both medicinal and culinary purposes, while pepsin is one of the most important medicines of the pharmacopoeia. The ovarian substances employed in the treatment of female diseases are also derived from the pig. The wool-fat which enters into the composition of some kinds of medicinal ointments is obtained from the wool of the sheep. Many of the bacteriological products are prepared by culture of the disease germs in horse-blood. Anti-venene, the snake-bite cure, is also contributed by the horse which is immunised against the action of cobra-venom by injection of gradually increasing doses of the poison. Important perfumes which also possess medicinal properties are yielded by certain mammals, the most ancient and highly prized of such scents being the musk. The well-known scents, civet and castor, are of animal origin. Civet was at one time reared in special farms in South India ; at present it is mostly collected in Arabia and the neighbouring countries. The higher mammals whale, porpoise, dugong and seal, also yield valuable oils considered to possess healing virtues. Ambergris is a very valuable perfume which occurs in sperm whales and is considered to be a growth caused by the beak of cuttle fish, the natural food of the whale. Sometimes a whale is secured which brings a fortune, as the one recently killed by Captain Ingbrightsen, containing ambergris weighing over a hundred weight, an ounce of which is worth about £20. Jungle people have in general a great faith in the restorative powers of the bear's and tiger's fat in some kinds of obstinate diseases of the joints and muscles.

Last of all we come to the monkeys which, since the successful experiments of Voronoff in transplanting their glands on human beings, for rejuvenation, have acquired a great medico-commercial

importance. Under the auspices of the Paris Pasteur Institute a monkey-farm has been started in West Africa, for the purposes of general experimentation with drugs ; of testing and preparing various serums and anti-toxins and above all of obtaining those glands which will give a new lease of life to man. Following on the foot-steps of the great French Institution a wealthy and enterprising American lady, Mme Helena Rubinstein, has established a similar farm in a jungle island in the Atlantic Ocean, off Madeira, with a view to supply the glandular products of the higher anthropoid apes to the trade.

A PEEP INTO HINDU MEDICINE

Continued.

BY

ASHUTOSH ROY, L.M.S.

Hazaribagh.

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SECTION VI—AYURVEDIC PATHOLOGY.

We have already stated that every branch of Ayurvedic medicine is based on the "Tridosh theory" and its pathology is no exception to this rule. Ayurved says that when the three doshes, "Vayu Pitta and Kapha" are acting in equilibrium and harmony, the state of the body then constitutes *Health* ; but when this delicate equilibrium of the body is upset by disharmonious action of the three "doshes", disease is produced.

The so-called equilibrium of Health really varies within narrow limits, and is known as the "acid-alkali equilibrium" of the body etc, the component parts in modern Bio-chemistry. In fact one aspect of the doshes—"Pitta and Kapha",—corresponds to the acid and alkali of the body. As the acid-alkali ratio or "Pitta-Kapha" equilibrium is regulated by "Vayu" (Nervous agency), the "Tridosh theory" includes the modern theory of the Bio-chemists, but the complete theory resembles very closely the modern theory of Sympathetic-Endocrinology as discussed in my book, "Pulse in Ayurved."

Taking the organic cell as unit of the body, while physiologically the centripetal force which carries food-material to it is

constructive, the centrifugal force which carries away waste products of metabolism from the cell is preservative as well as destructive (from the broad point of view of subtraction from the bulk of the cell-matter), pathologically the process is reversed for the centripetal force carries the agent of disease from the periphery (outside or inside the body as the case may be) and is thus destructive, while the centrifugal force which carries away the agent and products of disease-process is preservative and constructive indirectly.

According to Ayurved "disease first affects the "Purush" (Inner man or centre of the cell) and spreads to periphery (different parts of the body, the manifestations of "Prakriti"). This centripetal flow of disease is part of the Universal Law. The shock is first felt at the centre of vitality when malaise is felt." This, says Dr. Gossain, (Vhisagratna's Susrut) is also Hahnemann's theory viz. that "it is when the self-acting vital force is deranged by dynamic influence of a morbid agent inimical to life that disease occurs." This self-acting vital force in the human organism or micro-cosmic force has naturally limited manifestation within the human body. Ayurved has divided this vital micro-cosmic force into three forces, conjointly known as "Tridosh" viz. the forces of construction (Kapha or Anabolic Endocrine force), the force of destruction (pitta or Katabolic Endocrine force), the force of regulation (vayu, keeping the first two opposite yet complementary forces in equilibrium and harmony).

We know that man is more or less a bundle of Nerves (the master-tissue of the body) in a world (our environments, both outside and inside us) which is continually bombarding us with their impulses. Every cell of the body is therefore being continually acted on and is reacting to every impulse arising from the world outside as well as within us (originating inside our body). Thus external as well as internal agents are continually acting on us and may affect us in various ways. Ordinarily we absorb those influences which are healthy and helpful to us, while we repel those which are useless, harmful and dangerous. In health sufficient protection is afforded by the action of "Tridhatu" (the three tissue and glandular systems, viz. "Vayu dhatu" or the Nervous System, the "Pitta-dhatu" or the Katabolic group of Endocrine glands and the "Kapha-dhatu" or the anabolic group of Endocrine glands) acting harmoniously. In disease, it is otherwise.

As soon as the morbid agents of disease force an entry and lodge in any part of the human organism, the news is instantly transmitted by the "Vayu-dhatu" (Nervous tissue) to the "Purush" (Inner man, centre) which in turn sends appropriate orders to the "Pitta or Kapha" group of Endocrines as the case may be, to act and repel the morbid agents either by Katabolizing or destroying them or by anabolizing (or engulfing them with the aid of Leucocytes as we now know) them. If these succeed in doing so successfully, the disease is aborted; if otherwise and the disease gets the mastery over the defensive agents of the body, it effects the three "dhatus" singly or in combination, upsetting the harmonious actions of the three "doshes."

When, therefore, disease gets the upper hand, the first effect is felt by the three "dhatus" singly or jointly. This is true of all *acute diseases*. Hence a disease according to Ayurved may be caused by derangement of any one of the three "doshes" resulting in a "Vayu", a Pitta or a "Kapha" disease or by derangement of any two of the three "doshes" resulting in a "Vayu-pitta", a "Vayu-Kapha" or a "Kapha-pitta" disease or by derangement of all the three "doshes" together resulting in a "Sannipatik" disease. The derangement of "doshes" may either be of the nature of excitation or depression as the case may be. Accordingly we have seven different kinds of acute diseases of any kind according to particular "dosh" or "doshes."

When "Vayu" is excited or depressed we find the various symptoms associated with excitation or depression of any part of the Nervous System or the entire system. Ayurved describes 5 kinds of principal "Vayus" situated in the five anatomical regions into which the human body is divided viz. Head, neck, chest, upper and lower abdomen.

When "pitta" is excited it results in increased blood supply of a part resulting in pathological inflammations associated with disease. When it is associated with excited "Vayu", there are haemorrhages from various sites. When "pitta" is depressed there is lessened cellular activity and blood supply of the part of the body, according to any one of the 5 different "pittas" at different sites involved in the disease-process.

When "Kapha" is depressed there is increased flux; when it is excited the secretions and excretions are at abeyance, specially if associated with depressed "Vayu". As there are five "Kaphas"

according to locality, these effects vary accordingly and may be local or general according to involvement of particular "Kapha" of a locality or general involvement of "Kapha" in the disease-process.

In *Chronic diseases*, i. e. diseases lasting longer than a period of 3 months and more, not only the "doshes" but also the "dhatus" (tissue systems) are involved. When several tissue-systems are affected in an organ, naturally it is involved in the disease-process and we get *Organic disease*. In Chronic diseases, continued excitation of "Pitta" increases tissue-katabolism, resulting in wasting diseases, just as continued depression of "Kapha" increases tissue anabolism resulting in new growths or tumours, benign and malignant, or in accumulation of fluids at various sites of the body as the various oedemas.

The theories of both Ayurved and Homeopathy are based on the "vitalistic theory" of the ancients, as well as take into account both the physiological and psychological factors involved. The same is true of the modern theory of Sympathetic-Endocrinology to which the "Tridosh theory of Ayurved" bears a close analogy. There is no doubt that both the physiological and the psychological factors in man are indissolubly bound up together and one cannot be strictly separated from the other in health as well as in disease.

In disease there are two factors—the Soil and the Seed ; while the former (the organism of the particular individual who is ill) is fixed, the latter (the different causative factors of disease which may be bacterial, chemical, mechanical and so forth) is variable. Eastern and ancient pathology is based on the fixed factor and hence its theory is not continually shifting like the modern theory of causation of disease. The theory of causation of disease of ancient medicine can therefore be improved upon, but not changed.

Thus Cox (in his book—Hippocrates and Galen), the able translator and critic of ancient Greek medicine, had remarked "that the edifice we (moderners) have raised is not more stable than what the ancients had done." This is true of Ayurved also. It is interesting to note that modern medicine with its Study of Sympathetic-Endocrinology and Bio-Chemistry is slowly but surely giving increased attention on the "Soil" or the Study of the individual in health and disease.

The classification of disease in Ayurved on "Tridosh" theory had been methodically discussed by Madhab Kar in his "Nidan", the Standard Ayurvedic book on the subject.

(7) *Bacteriology in Ayurved*

Amongst the morbid agents which upset health are included the Bacteria. Since the brilliant discoveries of Koch and Pasteur, Bacteriology dominated Modern Western Medicine. It may be noted that besides Bacteria which are the causes of various Infective diseases, there are other morbid agents which induce ill-health. Further, as we have already stated that in diseases, there are two factors, Seed (the various morbid agents) and the Soil (the human organism where diseases manifest themselves by various symptoms). The point to note so far as Ayurved is concerned is that Bacteria did not occupy the all-important place they occupy in modern medicine. In fact the Soil was more or less ignored in Modern Medicine with the advent of Bacteriology.

Apart from the fact that there are several weak and faulty links in the Bacterial theory of diseases, the following should be noted in this connection.

"Germs cannot fully explain the phenomena of diseases. It is not the last word in Modern Medicine" (Editorial, Lancet 1909).

"Diseases like clinical cholera, dysentery etc. can be produced by germs as well by toxic amins." Everything depends on the substrata (the Soil) in which it acts" (Editorial, Indian Medical Gazette Nov. 1923).

"Certain germs in the body may be living in perfect amity or neutrality or even harmonious helpfulness. They are then otherwise than pathogenic. Transmutation of germs from healthy to pathogenic is a recognized fact. Even the most orthodox recognize a common origin." Homœopaths believe that germs are one of the effects not causes of disease, for everything depends on the substrata, the condition of the human body. "All bacterial diseases are essentially intoxications with protein-split products, the individual phenomenon depending on localization." So we speak of regional action of microbes and non-specific protein therapy.

"Germs are one of the exciting causes of certain diseases. Modern medicine classifies diseases into infective, traumatic,

metabolic, psychic etc." Ayurved on the other hand covers all those various factors by taking into account the Soil. It is a mistake to consider a part for the whole.

Soil is therefore as important as the seed in determining the outcome of a disease. Susceptibility can be won and lost. Individual resistance offers a better field than direct attempt to eliminate germs from the world.

The trend of modern medicine therefore is to get away from the present position of attaching exaggerated importance to the germ theory and to take up more or less the Ayurvedic view of according the soil greater importance than the seed.

Mass physiology, pathology as well as mass hygiene are the outcome of the study of Bacteriology. The keynote of Ayurved is the Study of the Individual in health and ill-health, in the advent of preventive and curative spheres. Modern Medicine with the the newer physiology in the endocrine and Bio-chemic spheres have begun the study of the Individual and is thus going over the same field traversed by Ayurved.

"We have lingered long enough" says Dr. Muthu, "on the mile stone of Bacteriology. We are now tempted to stop at Bio-chemistry (and Endocrinology). Further on the way sociology meets us and Psychology beacons us."

"The Spirit of the times" says Leonard Williams, "demand that we should adjust our angle of vision (by Study of the Individual instead of Study of Man in the Mass, by Study of the Pathology of Constitution over and above the Pathology of Infection). Yesterday was the day of the Pathologist, more specially of the Bacteriologist. Physiology and Medicine all wrung in the withers and quite crestfallen, contented themselves perforce with the crumbs that fell from the rich Microbic Tables. But the whirl-gig of times bring in its own revenge. Today, tomorrow and the day after are foreordained to the Physiologist. Their hour has come through the agency of the glands of Internal Secretion."

Still it cannot be denied that the development of bacteriology has added to our knowledge of one phase of certain diseases we call Infective and clarified several obscure ideas.

So far as Bacteriology in Ayurved is concerned we find "the bacterial origin and infectiveness of certain diseases noted in Ayurved, diseases like Leprosy, Tuberculosis, Small Pox and other Eruptive fevers. The bacteria referred to are so fine as to

be invisible to the naked Eye, which circulate in the blood and induce diseases" (Mahamahopadhyay Gananath).

It no doubt excites our wonder how Ayurved could accurately guess of the existence of germs without knowledge of collateral sciences, with the absence of instruments of precision for observation of these germs like the microscope as well as want of knowledge of present laboratory methods. Were they endowed with the "Sixth Sense" or the "Third Eye" to observe all these phenomena ?

Regarding the practical applications of Bacteriology in Medicine, Ayurvedists were aware that flies and other insects were carriers of disease. That the causes which produce germs inside and outside the body are the same viz. filth, the products of decomposition of cell-matters, vegetable and animal. The germs are therefore of secondary importance, for if we can keep the inside and outside clean as well as our environments, we need not be afraid of germs.

The Ayurvedists further knew that "by repeated contact, by sharing the same food and the same bed, by use of the same clothes, contagious diseases are transmitted from one person to another." (Captain Murti, Pandit Shastri).

(8) *Ayurvedic hygiene and Preventive medicine.*

The key-note of Ayurvedic Hygiene is the study of the Individual, how to keep him healthy and prevent him from getting ill. In the domain of Hygiene and preventive medicine, modern west has paid almost exclusive attention on the "seed" just as Ayurved had paid almost exclusive attention on the "soil", the result being the study of "mass Hygiene" in our days as opposed to "Individual Hygiene" in those ancient days. This is the chief point of difference between ancient and modern medicine.

The personality of the Individual.

In Ayurved, Individuals have been grouped according to their diathesis or temperament, which may be, as already noted, exuberance of Vayu, Pitta, or Kapha or Vayu-pitta, Vayu-kapha or Kapha-pitta. This peculiarity of Individual diathesis depends on Heredity, Environment and acquired factors, all of which affect the Tridosh or the sympathetic-endocrine in various ways, giving each individual his peculiar temperament.

"The Ayurvedic physicians have elaborately dealt with the regimen of diet and conduct (or mode of living) to be followed during the day and night in the various seasons of the year by persons of different temperaments in climates and countries, which, strictly followed, would act as a good prophylactic against epidemics and other diseases and prevent those sad break-downs in health, so common at the present day" (Dr. S. N. Gossain).

These methods of Ayurved had been discussed under the heading "Dinacharya" (daily observations), "Ritucharya" (seasonal observations) and "Brahmacharya" (regulation of sexual function) and consists of Hygienic modes of living and performance of certain physical exercises.

"These hygienic measures consist in taking wholesome food, breathing pure and fresh air, remaining in good light, keeping the body clean externally and internally, taking regular physical exercises and breathing exercises. In fact "plain living and high thinking" was the motto of the ancient Hindus" (Dr. Bakshi).

Lorand (old age deferred) stated that a healthy strong sexual system prevents pre-senility. Ayurved regulated sexual life avoiding excess on the one hand and advising to follow healthy sexual life on the other."

One of the various methods of personal hygiene advocated in Ayurved is "never to avoid calls of Nature" which give shock to the various Nerves irritating and weakening them. A whole chapter in Ayurved is devoted to discuss the evil effects of such procedures.

Another important point of personal hygiene advocated in Ayurved to prevent auto-intoxication from the great cess-pool of the body, so common in the Tropics, is fasting religiously enjoined to be observed twice every month on the eleventh day of moon and semi-fasting (one meal in place of two) on the full-moon and No-moon days.

Pay more attention to the "soil" says Ayurved, for it is impossible to keep out the germs which are present everywhere. Individual resistance affords a better field than attempts to eliminate germs from the world. It is better and easier, for example, says Captain Murti, to feed children with fatty food in winter than to eliminate respiratory germs from the Nursery. Art cannot compete with Nature, says Dr. Bakshi. It is easier to improve Natural Individual resistance to infection than to eliminate germs completely.

While preventive medicine or mass hygiene can be successfully applied in a small rich place inhabited by enlightened people, it is impossible to be applied in a semi-continent like India with opposite condition (poor and backward population).

The extreme poverty of the Mass of Indian population, who never know from year in and year out what a full meal is, Indian people half-fed, half-starved, scarcely clad, have not sufficient vitality left to resist diseases. For proper nutrition is an important factor in Immunity. The diet of the Indian Mass at present is inadequate in quantity and quality. Nitrogen starvation as well as want of vitamines are the chief factors in the diet of middle class population of India.

The crux of the problem of Individual Hygiene is how to keep the "three doshes" in order, so that they act harmoniously.

A simple test is given in Ayurved which can be noted even by laymen to find out whether the organism is healthy or deviating from it. This depends on the physiological phenomena that we breathe alternately from one nose or the other. There is a regular order in which this takes place beginning from Sunrise to Sun-set depending on the particular phase of the Moon. Air comes in and goes out from one nostril for some time, then changes into the other. Between the change, viz. during the transition period (full 5 minutes) air goes in and comes out through both Nostrils. When the order as given in Ayurved is upset, you may be sure that you are on the road to ill-health.

Mass Hygiene or Preventive Medicine

While personal Hygiene was very fully developed in Ayurved, the same was not true of Mass Hygiene. The state of the country was quite different at the time.

"The contact of the East with the West has caused great social, economic, industrial, moral and spiritual upheavals, as seen in the growth of towns and cities, the decay of home-industries, increasing difficulty of agriculture, migration into towns with high rents, over-crowding and insanitation, dear adulterated food, poverty and want, intemperance and degeneration." Railway communications on the one hand and silting up of rivers paved the way for malaria while deforestation added to it. "The dark races, the simple children of Nature, living a less civilized and less strenuous life blessed with indolent peace and absence of care in the matter of feeding, clothing, drinking, coming in

contact with the strenuous west with its higher Civilization readily succumbed to the various epidemics so much prevalent in the land. Such is the penalty India is paying for the high materialistic Civilization she is gradually learning from the west.

But Ayurvedists had a very clear idea how epidemics occur. "Outbreaks of epidemics had been ascribed to contrary seasons, to the floating of minute animal and vegetable germs in the air (microbean clouds floating in the air), to earth quake, famine and floods (physical phenomena), wars between two neighbouring races" (Dr. Gossain). All these factors reduce individual vitality and thus increase susceptibility to Infection.

The ancient Hindus further knew that unusual mortality amongst birds, unusual death amongst rats are indications of a coming epidemic.

The idea of segregation is recommended in Ayurved in the case of persons suffering from eruptive fevers (to prevent infection of others). The segregation of the lying-in-room prevents infection of mother and baby from outside at a very critical stage.

Ayurved further advised evacuation of the village in case an epidemic rages there. All these and various ideas of Preventive medicine are found in Ayurved.

But of course it was not so highly developed as in modern medicine, partly at least, because there was not so much necessity for it. The trend of modern hygiene is to study Individual Health—a path already fully trodden in Ayurved.

Why India is so unhealthy at present.

The question naturally arises why inspite of the golden rules of Individual Hygiene, India is at present so very unhealthy. This is partly due to changed circumstances due to the contact with the west, but mainly it is due to ignorance of the mass who have not only forgotten the wisdom of their ancestors but have not acquired sufficient knowledge of modern Hygiene. Mass Education is the only solution. It is desirable that some ideas of Hygiene should be taught as a compulsory subject to school children. We draw the attention of the educationists of our country to the point.

CORRESPONDENCE

—o—

SOME SUGGESTIONS TO THE MADRAS AYURVEDA SABHA.

Of late the Madras Ayurveda Sabha while attempting to champion the cause of Ayurveda has launched criticism on the Government School of Indian Medicine and the head of that Institution.

The orthodox party of Ayurveda are ever fond of crying out 'Keep Ayurveda intact.' 'Don't pollute it by bringing it into contact with other systems of medicine'; what a narrow mindedness has taken possession of these venerable gentlemen. Why should they be afraid when they learn that along with Ayurveda Allopathy also is taught? Knowledge is pure. It is the nearest attribute of God. It is not a thing that can be rendered impure by comparison with other forms of knowledge. For progress, there should be open mindedness. There should be no prejudice. Today science rests on a very unstable ground. Theories are changing every day. What the Western scientist considers to-day as a most recent theory, appears to be one which is quite similar to the most ancient theory of Indian Sciences. For example, the conception of matter and energy of the Western Science before a decade is now blown-out and the latest electron theory of matter, which too must give place to another theory sooner or later, is very similar to our theory of 'Pancha Mahabhuta.' Even this electron theory must give place to another which enunciates that the ultimate cause of universe is *Consciousness* absolute which when becomes qualified is projected as creation and that therefore every atom in this universe possesses consciousness or will. This conception of matter is new to the present day scientist but which is purely an Eastern-idea.

All this may appear to be out of place but to show how a comparative study of science helps to bring out the glory of Ayurveda, I have given this as an example. One never loses by learning other theories. In this respect the Principal, Government School of Indian Medicine, who is himself a sound scholar of both the systems should be thanked for the policy of comparative study he has inaugurated in the school. Efforts should be made to study Ayurveda in the lights of modern sciences and thus help to enhance the glory of Ayurveda. It is no use to be a frog in the well.

Further the modern medical practitioner has to face competition. To-day struggle for existence is very keen and an Ayurvedic Medical Practitioner has to compete with his brother practitioners who practise other systems. To be successful, it is essential that he should be in touch with the most modern systems of the healing art.

It is alleged by the Madras Ayurveda Sabha that Sanskrit scholars are not employed in the Government school of Indian Medicine. This

is far from truth. Scholars who obtained 'Ayurveda Acharya', and 'Ayurveda Visarada' degrees of the 'All India Ayurveda Vidya Peetha' and those who underwent a four years course in the Madras Ayurvedic College, founded by the late Vaidya Ratna Pandit D. Gopalacharlu, the pioneer of Ayurveda in Southern India and who can be said to be the remote cause for the opening of the Government School of Indian medicine, are Pandits of no lesser learning than the gentlemen who now criticise that Sanskrit scholars are not employed in the Government School of Indian Medicine to teach Ayurveda. The allegation that only L. I. Ms. are employed in Dispensaries of the Local Bodies, is not a fact. On the other hand the G. O. does not prevent the local bodies from employing any practitioner whom they consider qualified to hold the post of the Physician.

Captain G. Sreenivasa Murti has said 'that he does not see why a qualified Ayurvedic Medical Practitioner should not be employed even in Government subsidised Rural dispensaries provided they are found to be able to meet the Medical and surgical (including obstetrical) needs of the people.'

The real source of mischief is elsewhere, for I learn that some L. I. Ms. are now canvassing in Guntur, Kistna and West Godavari Districts that non-L. I. Ms. who have studied in Private Colleges are not qualified to hold Physicians' posts in the dispensaries under local bodies. For example, in Ongole Taluk Board one or two L. I. Ms. are carrying on propaganda that Ayurvedic Physicians other than L. I. Ms. are not qualified to hold physician's post. It is to be pined that no body pays any attention to their mischievous propaganda. In this connection, the Principal of Government School of Indian Medicine should be requested to instruct the out-going students of his school not to deal in such activities.

The third point of criticism is that English is laid as one of the qualifications for admission into the school. Surely, for reasons already said, for a comparative study of medicine, English is essential and it is no wonder that the Principal should put it down as one of the requisites for admission. But, in fact a knowledge of Sanskrit is given preference in the admission of students.

In the report submitted by the Madras Ayurvedic Sabha to the Government, they have advised the Government to close the Institution. What a foolish idea it is? The fruits of so many years of labour, our friends want to undo with one report. The present attitude of the Government is such that they will be too glad to take up the suggestion and no wonder they may pass orders tomorrow asking the school to be closed. If the school is closed where can you get knowledge of Anatomy which is quite essential for any medical practitioner, no matter how well he

follows. I therefore advise my brother practitioners not to venture such irresponsible suggestions.

As regards the curriculum of studies in Govt. school of Indian medicine, it will be more reasonable if we agitate that special facilities should be created for conducting research work in Ayurvedic drugs and medicines etc.

If the orthodox party wish for a purely Ayurvedic school, there is a suggestion in the "Bill of Tirupati temple" to open Ayurvedic and Allopathic dispensaries from the funds of the Tirupathi Devasthanam. Instead of opening such dispensaries they can as well agitate through the Madras Legislative Council by our president of Sabha, Mr. Satyamurti, for the opening of a purely Ayurvedic school where no other system is taught.

L. F. Dispensary

Kottapatam.

Date. 18-12-31.

N. KESAVACHARLU, A. M.A. C.

Medical News & Notes

THE INJURIOUS EFFECTS OF COSMETICS.

Writing in *Medizinische Klinik*, Dr. R. L. Mayer, of Berlin, points out that it is generally believed that the mechanical factor in powdering and painting namely, the clogging of the excretory duct of the sweat glands, inhibits the normal secretory function of the skin and thus causes it to become flabby and grayish. It is probable that this factor has a certain influence, especially when the perspiration is profuse, as is frequently the case in actors; but whether this clogging of the pores is also of significance in the customary daily use has not been proved. However, injurious effects do result if the powders or paints contain poisonous ingredients, such as white lead. In some countries the use of white lead is prohibited. In other countries white lead has not been legally prohibited as yet, and in these countries the injurious effects of cosmetics are most common, not only on the skin but occasionally manifested as symptoms of severe poisoning like those noted in lead poisoning; in many instances the white lead in the cosmetics has been found to be the cause. In Japan, where women use powders containing mostly white lead, it has been noted that breast-fed infants frequently develop meningitis, and the lead-containing powders have been considered the cause of this. Efforts are now being made in many countries to prohibit the use of white lead in the preparation of cosmetics. But even if the cosmetics do not contain poisonous substances, local symptoms of

irritation may develop. Some persons may have a hypersusceptibility toward certain ingredients, most frequently toward the dye or the scent. However, these cases are extremely rare. It is usually difficult to detect the offensive substance because the perfumes used for scenting the powders sometimes contain from fifteen to twenty-five different substances. A person who is hypersensitive to a certain powder should either not use any powder or should try other brands. In cases of inflammation of the mucous membrane of the lips resulting from the use of a lip-stick, it has been found that either eosin or rhodamine was the cause. In discussing hair dyes the author points out that those of vegetable origin, especially henna, are harmless. However, the oxidation product of synthetically produced amines have likewise been used for hair dyeing in recent years and in some persons they cause complications. These substances are used also for dyeing furs, and occasionally inflammations of the skin develop after contact with such furs. Metallic dyes are sometimes combined either with organic dyes or with henna, and the author thinks it advisable in order to prevent serious complications, to test the dye first on small portion of the hair. He also advises against bleaching the hair with hydrogen dioxide.

INDIAN SCHOOL OF MEDICINE

Criticism Of Policy

CITY AYURVEDA SABHA MEETING

MADRAS Dec. 1.

A public meeting was held last evening under the auspices of the Madras Ayurveda Sabha at Tholasingaperumal Koil Street, Triplicane, to consider the present state of Ayurveda.

Vaidyaratna Bharata Sastri proposed Mr. S. Satyamurthi to the chair and said that he was the fittest gentleman to preside over the meeting. He said that Ayurveda had fallen on evil days and that it should be revived at all costs. He was sorry to note that at a time when every lover of Ayurveda was trying his best to keep the science intact in its pristine purity, the School of Indian medicine run by the Government in Kilpauk had entirely lost sight of the object with which it had been started. The Oosman Committee which consisted of many experts had recommended that lessons should be taught on purely Ayurvedic and Siddha lines. But a departure had been made which was quite detrimental to the study of Ayurveda. Scholars in Sanskrit were not employed as professors. A. G. O. had been passed that only L. I. Ms who came out of the school should be given appointments in the dispensaries of local bodies. Competent Sanskrit scholars who had sound knowledge of Ayurveda were denied such appointments. Charaka and Susrutha

were not taught in the school. Only those who knew English were declared as eligible for admission in the school and candidates who were proficient in Sanskrit or in any other vernacular were declared as unfit for admission. Medicines were not got from renowned Ayurvedic physicians. Whatever might have been done in the past, the School should in future be run on strictly Ayurvedic lines and scholars in Ayurveda should be employed as professors.

Mr. N. V. Krishna Wariar seconded the proposition which was duly carried.

REPORT TO GOVERNMENT

Mr. G. S. Sarma, Secretary of the Ayurveda Sabha, read the report submitted to the Government.

The report stated that the opinions received from members of the Sabha from the city and mofussil showed in unmistakable terms the fact that the School of Indian Medicine was the death knell of Ayurveda and that the earlier it was closed the better for the preservation of the ancient culture and practice of the indigenous systems. It had been very clearly pointed out that the indigenous system required and deserved Government help for reviving it ; for the system was complete in itself in every branch. The purity of the course was indispensable for proving the superiority of the indigenous system. This grand object had been set at naught by the organisers of the School of Indian Medicine. The authorities were trying to arm themselves with the sanction and authority of the Government for completely suppressing the great scholars and practitioners according to the Hindu science. In these circumstances the Sabha had urged on the Government the necessity to perfect the orthodox learning and practice and to entrust the Institution into the hands of thorough orthodox scholars.

NO PROGRESS

Mr. Subramania Sastri also criticised the work of the school of Indian Medicine and said that Captain Srinivasamurthy Principal of the Institution was not a real lover of Ayurveda. It was 7 years since the School had been started and yet it had achieved nothing in reviving the indigenous systems. On the other hand its efforts were calculated to kill Ayurveda. Charaka and Susrutha and the 8 Angas were not at all taught. Out of the 5 hours of study 3 hours were allotted for surgery. Two Malayalee professors had been appointed to teach Telugu and Tamil. Did it mean that Telugu and Tamil professors were not available? Surgery was not conducted purely on Susrutha lines. But on the other hand western system of surgery was followed. Treatment was not given strictly on the lines of Charaka. Students who got marks even bellow the minima were declared to have passed in examinations. The

students who came out of the School were proficient neither in the western system nor in the indigenous system.

The Surgeon-General had said that he would not recognise them nor were they to the satisfaction of Ayurvedic scholars while L. I. Ms were given appointments. Ayurvedic scholars knowing only Sanskrit were denied that privilege. Ayurvedic medicines were not got from reputed Ayurvedic physicians.

RESOLUTIONS

Mr. Natesa Sastri moved the following resolutions :—

This meeting of the Madras Ayurveda Sabha resolves that the Government may be pleased to adopt every precaution for protecting the ancient learning and the orthodox practice by giving the ancient system a lasting life so as to make it useful like every good system in the world.

This meeting further resolves that the Government may be pleased to entrust the Government Institution of Indian Medicine into the hands of one of orthodox persuasion, capable of rendering every satisfaction to modern critics and promoting in the best manner the interests of Ayurveda, pure and simple, so that the theory and practice of Ayurveda may be studied and practised for its own sake and in the same good old pious and charitable spirit.

Mr. Rajagopala Iyer seconded the resolutions and said that Charaka and Susrutha were not in their original state. They should be codified in their original form. There should be interconnection between the diagnosis of disease and the potency of the drug. There was absolutely no research work. There was no use of speaking about the glory of Ayurveda. They should concentrate their attention to research work.

Mr. Srinivasaraghavachari supported the resolutions.

SCHOOL DEFENDED

Mr. V. Narayanasami replying to the criticisms said that those who had sponsored the resolutions had not acquainted themselves with the real state of affairs obtaining in the School of Indian medicine. It had been said that there were only 5 hours of study. Students came at 7-30 a.m. and studied till 4-30 p.m. They were given training in practical lines in Anatomy and other branches. 1,000 persons were being treated as out-patients and there were 100 in-patients. There were maternity and surgery wards. Although they learnt the allopathic system in certain respects, Ayurvedic medicines only were used. Students of 3rd and 4th year classes handled cases under the direct supervision of professors. Charaka and Susrutha with commentaries in Sanskrit were being taught. For the first three years a student had to learn Sanskrit. Just as an Indian could be professor of English, Malayalee gentlemen were also teaching Telugu and Tamil. Only 33 per cent of students passed in

the examinations. There was therefore no truth in the allegation that even though they did not get the required minima in the subjects they were declared as having passed. Scholars like Bharatha Sastri were also examiners. Everything was included in the high proficiency test.

Mr. Suryararayana of Bezwada also defended the policy of the school. He said he was proud to call himself a product of the School of Indian Medicine. People who had their own axe to grind exploited the name of the late Pandit D. Gopalacharlu and had cast aspersions on Captain G. Srinivasamurthi, a great man who was universally respected. He was the pioneer who was struggling hard to revive the indigenous system. These orthodox people had done nothing for the last two centuries to revive Ayurveda and they wanted to cast obstacles in the way of Mr. G. Srinivasamurthi. It was said that sound scholars were not employed as professors. Mr. Madhava Menon, the first disciple of Pandit Gopalacharlu was a great scholar and he was a professor in the School.

The speaker in conclusion appealed to the audience to oppose the resolution.

MOVER'S REPLY

Mr. Subramania Sastri also opposed the resolution and said that they could not extend the period of 4 years in the School as the Government could not give them sufficient financial help. Within this limited time only some books could be taught. Government could not give appointments to all the pandits.

Mr. Satyamurthi : That point is neither new nor decent.

The speaker also said that examinations were rigidly conducted. There was synthetic study in the School. As far as possible, surgery on Susrutha lines was also taught. Their policy was to take all the best things in other systems and combine them with the indigenous system.

Mr. Natesa Sastrigal replying said that he was obliged to make personal remarks after he heard the speeches of previous speakers. Captain Srinivasamurthi had made no secret of his view that they should make a combination of all the best elements found in various systems. He had also said that they could not copy parrot-like all impossible things found in the old texts. This idea was entirely in consonance with the views of those who wanted to have a national religion. It was no wonder that Mr. Srinivasamurthi who was a staunch theosophist had such an idea on medicine. The speaker's contention was that Ayurveda should be kept intact in all its pristine purity and that its superiority over other systems should be demonstrated. He did not want to decry any other system.

The resolutions were put to vote and carried by a large majority.

ENQUIRY SUGGESTED

The President said that Ayurveda had been in existence for several centuries long before other systems were invented. It was by itself a sound system which was invented by the Rishis. Its individuality should be kept intact and its purity should not be marred by introducing the elements of other systems into it. India was a poor country and therefore any system which was calculated to make medicine costly should be discouraged. They should run the institutions in such a manner that cheap Ayurvedic medicines were made available even to poor people. If Ayurvedic medicines were encouraged, there would be no necessity to purchase foreign drugs and thus the exploitation of the wealth of the country could be stopped.

The School of Indian Medicine was started with the object of encouraging Ayurveda. It appeared to the speaker from the reports that the School had lost sight of the object. People had implicit faith in Ayurveda. There should be no restriction placed on the local bodies regarding the purchase of medicines. The Oosman Committee had opined that the Indian systems were logical and scientific. When such was the case why should there be another addition of the General Hospital at Kilpauk.

Why should they say that L. I. Ms. only were eligible for getting appointments? The Government should appoint a committee to enquire into the allegations.

The Ayurvedic pandits also had a great responsibility. They should extend their activities and be up-to-date in their work. They should carry on research work.

Mr. T. S. Anantharama Iyer proposed a vote of thanks and the meeting terminated.

The speaker repudiated the suggestion that because some people wanted appointments in the School of Indian Medicine they carried on this agitation.

"Swarajya"—Dec. 31.

VIII. All-India Medical Conference.

The eighth All-India Medical Conference will be held in Calcutta during the ensuing Easter holidays. Subjects concerning the vital interest to the medical profession in India and the formation of Indian Medical Council will be discussed in the Conference. Scientific Section of the Conference and the Exhibition will no doubt afford every medical man a good opportunity to know the advancement made in this country in medical science. In order to make this Conference thoroughly representative of the medical profession of India it is requested that all members of the profession should join the Conference and take part in

the deliberation. For particulars regarding accommodation etc., please write to the Secretary, 67, Dharmatala Street, Calcutta. Delegation fee has been fixed at Rs. 5/-.

MEDICAL EXHIBITION.

In connection with the All-India Medical Conference a Medical Exhibition will be held in Calcutta during the next Easter holidays. It is expected that Medical men from all parts of India will attend the Conference. It will afford a very good opportunity to dealers and manufacturers of medical requisites to exhibit their products. Those who are willing to take stalls at the Exhibition will please write for particulars to the Secretary, Exhibition Committee, 67, Dharmatala Street, Calcutta.

Preparation for the Eighth All India

MEDICAL CONFERENCE.

The Reception Committee of the All-India Medical Conference formed by the members of the medical profession of Calcutta is astir to make the Conference a success. The Corporation of Calcutta has very kindly lent the use of the Town Hall for the Conference and the medical exhibition. The exhibition will be opened on the 24th March at 5 P. M. The following provisional programme has been made :—

25th March—12 A. M. to 2 P. M. opening ceremony ; Welcome address of the Chairman of the Reception Committee ; Presidential address and formation of the Subjects Committee. From 2 to 5 P. M. Scientific Section ; 5 to 7 P. M. Tea ; 8-30 P. M. to 10-30 P. M. Subjects Committee's sitting. 26th March 8 A. M. to 10 A. M. Visits to Institutions and meeting of Subjects Committee. 1 P. M. to 4 P. M. Conference. 6 P. M. to 9 P. M. Scientific Section. 27th March 8 A. M. to 10 A. M. Visits to Institutions and meeting of Subjects Committee. 1 to 4 P. M. Conference. 4 to 6 P. M. Tea. 6 to 8 P. M. Annual Meeting of the Indian Medical Association. 8 P. M. Dinner. 28th March 8 A. M. to 10 A. M. Conference—conclusion. It is expected that a large number of delegates from all over India will join the Conference. Arrangements have been made for free accommodation for the delegates. A nominal charge may be made for boarding.

THE TURPENTINE INDUSTRY.

The Indian turpentine industry represents Britain's great contribution to the systematic development of the production of natural resin, said Mr. C. H. Barry, in an address to the Oil and Colour Chemists' Association. India contains the turpentine area in the Empire, and

affords a remarkable example of what can be done by organisation and careful control in the face of almost insurmountable difficulties. The turpentine area in India is a comparatively thin belt of trees along the Himalaya mountains, but it has been found possible, by the introduction of the latest and most scientific methods, and by the development of centralised factories, to produce a resin and a turpentine which are admittedly of first-class quality, and are supplying nearly all India's internal needs in this direction. It still costs rather more to send the products to South India, however, than to export, because of the difficulties of transport, but the development of the industry is a remarkable achievement, and is mainly the result of the work of the Indian Civil Service.

INDIAN SANTONIN.

Colonel R. N. Chopra, I.M.S., and Mr. B. Mukherji, of the Department of the Pharmacology, Calcutta School of Tropical Medicine, have compiled a very useful note on Indian species of *Artemesia* (Indigenous Drugs Inquiry, I.R.F.A. Series No 27) Before the War practically all the santonin on the Indian market was of Russian origin and was imported from Europe. It was obtained from *Artemesia cina* Berg., but there are many allied species, such as *A. maritima* var. *stechmanniana* Besser (*A. lercheana* Karel and Kiril), *A. pauciflora* Stechm., etc., which are indigenous in the vast uncultivated plains of the Kirkhiz in Turkestan. Many species of artemesia are also widely distributed over different parts of Europe, Asia and America. Formerly large quantities of the strongly-aromatic flower heads were collected and sent to the European markets, especially to Moscow and Petrograd; some also found their way to India through Afghanistan and Persia. Factories were later established in some of the large towns in Turkestan where santonin is extracted and the purified product is now mainly exported. Some years ago there was a great scarcity of santonin owing to the wasteful and destructive methods of collection, and to the political and economic upheaval in Russia. Efforts were, therefore, made to find other sources of the drug with a view to increasing its output. The plant was found only in a restricted area in Turkestan and attempts at the extension of cultivation had hitherto failed. Many species of artemesia grow in the Himalayas, but *Artemesia brevis folia* Wall, which contains santonin, grows fairly abundantly in certain parts of Kashmir. A factory for the manufacture of santonin in Kashmir has been under contemplation for some time, and although a certain amount of santonin has been produced, it does not appear to have been manufactured on a commercial scale. Within recent years (1926-27) a new source of santonin has been discovered in India. In the Kurram valley in the North

Western Frontier Province, at a height of 4,000 to 5,000 feet above the sea level, artemesia has been found growing in abundance. Beside the artemesia already growing wild, a very large area of waste land is suitable for cultivation, and it would only be necessary to protect it and give it an occasional watering to produce good crops. If these operations are successful, it is to be expected that India would not only be completely self-supporting as regards her santonin requirements, but would be able to export a large amount. Santonin, is one of the most expensive drugs in the pharmacopœia, its current price being about Rs. 400 per pound, During the War and for some time after, it was selling at Rs. 720 per pound, a single dose of 3 grains costing nearly a rupee. Even with the introduction of such anthelmintics as chenopodium, which are very active against ascaris, it is found that a combination with santonin gives better results. The huge demand of santonin, therefore, can easily be understood. For mass treatment in a poor country like India, it is essential that some source be found from which santonin can be extracted and sold at a very much cheaper rate than the present one. From what has been said above, it will be seen that if all the Indian resources are developed, this should not be difficult. The incidence of ascaris and oxyuris infections amongst the population of this country is very heavy indeed. This will be seen from an estimate made by a previous worker (Chandler 1927) in helminthological department of the Calcutta School of Tropical Medicine and Hygiene. Over 65 per cent. of the population in Burma, Assam, Orissa and parts of Madras, where the rainfall is heavy and the surface water abundant during the monsoon season, appear to be affected; in Bengal and parts of Bombay the incidence is from 35 to 50 per cent. and in the United Provinces it varies from 15 to 25 per cent.; in the drier parts of India like the Punjab and Rajputana, though the incidence is less than in the parts mentioned above, it is in no way insignificant. The development of the santonin industry will, therefore, be very beneficial to all concerned.

NATIVE MEDICINE MEN.

Under the Medical, Dental and Pharmacy Act, 1928, native "medicine men" who have been granted licences by their own chiefs are allowed to practise in their own tribes, but a number of them, taking advantage of this clause, have set up in Durban and other large towns. They mostly claim to be experts in venereal diseases and sexual ailments, and are doing a great deal of harm. However, the Native Code can be amended by proclamation, and the Minister for Native Affairs has promised to look into the matter. When this question was raised in the House of Assembly last month, one of the members drew attention

to what he described as the crying need among the natives for properly-trained medical men of their own. There are at present no facilities in South Africa for the training of native doctors. The Transkei Native Council recently asked the Minister to permit natives to be trained as doctors in South African universities, and has offered, in the event of the South African universities being unwilling to provide the necessary facilities, to send young natives overseas to be trained at the natives' expense, but this request was refused.

To

The Editor,

JOURNAL OF AYURVEDA.

I shall thank you if you will publish the following in the next issue of your paper :—

THE ALL INDIA AYURVEDA VIDYAPEETH EXAMINATIONS.

The Annual Examinations of the All India Ayurveda Vidyapeeth will commence on Thursday the 31st of March 1932 at different centres throughout India. It had been decided by the Ayurveda Vidyapeeth that Examinations shall commence on the last Thursday of March every year unless mentioned otherwise. Students desirous to appear for the Vidyapeeth Examinations should get application forms from the office of the Vidyapeeth Poona 2, by sending necessary postal stamps and should send the forms duly filled in to the Vidyapeeth office Poona 2, before the 25th of February 1932. Examination fees, Rs. 3/- for Bhishak, Rs. 5/- for Ayurveda Visharada and Rs. 7/- for Ayurvedachary Examination must be sent along with the application forms. Forms without Examination fees will not be accepted. Application forms or Examination fees will not be accepted after the 29th of February 1932.

Application forms can be had from the Provincial Secretaries of the different Provinces as well as from the Superintendents of different centres. Application forms also can be had from the affiliated Ayurveda Vidyalayas and Institutions. Newly printed forms should be used. Old application forms have been cancelled.

Yours faithfully,

KRISHNASHASTRI KAVADE,

General Secretary,

All India Ayurveda Mahamandal and Vidyapeeth, Poona.

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[No. 9.]

All India Medical Council Bill

BY

DR. M. R. SAMEY, M.D.

Basavanagudi, Bangalore City.

The Indian Medical Council Act essayed by the Bill in question is on the face of it a stop-gap to placate the British Medical Council to extend the glorious privilege of recognition of Indian medical degrees by the British Medical Council of Great Britain and therefore quite apologetic in its very conception.

It smacks of a preparedness of the Government of India to submit the Indian medical profession to any imaginable humiliation just to accommodate a centesimal proportion of Indian University medical graduates who may desire the ephemeral privilege of registration in the British Medical Register to undertake medical practice in Britain. The dubious advantage of availability of Post Graduate Instruction for Indian medical graduates through registration by British Medical Council only is watered down by the fact that the Medical Corporations and Post Graduate Institutions in England and Scotland allow Indian medical graduates to avail themselves of the higher studies offered by them without recognition and registration by the Medical Council of Great Britain in common with medical graduates of other foreign countries and this plea for an Indian Medical Council Act stands effectively scouted as such.

Besides, these Indian medicoes who settle down to practise in England are infinitely small in number

and, nine to ten, command British medical qualifications *per se*.

The comprehensive nature of the ambitions is manifest in the fact that the All India Medical Council Act is attenuated and whittled down to abject narrowness by the exclusion of Medical Licentiates who form the bulk of the Medical Profession in India, in and out of service.

The inadequacy of the Bill to provide for the national self-respect of the medical profession of India is so glaring that the role of a Deputy President is unblushingly allotted to the British Medical Council without even so much as a word of reciprocity being anticipated in the Bill. The entire machinery of an Indian Medical Council and an Indian Medical Register is conceded to be set up at a great expense just to solicit an assenting nod of the British Medical Council, and for what avail? For the doubtful advantage of the glorious privilege of practising in the British Isles which has a plethora of physicians and surgeons even to spare for her colonies and Dependencies. There are more doctors than patients in England and Literature, Mythology, Fine Arts, Film Industry and Fiction have drawn votaries from its unemployed ranks.

Even if the British Medical Corporations and Diploma-dubbing bodies exclude Indian medical graduates from availing themselves of their Post Graduate studies, there is Vienna, that Mecca of Medical Post Graduate Studies and Germany and France and U. S. A. to afford facilities for Medical Research and studies and medical wisdom shall not fly away from India at the bidding of the British Medical Council. There are already the Provincial Medical Councils set up by the various Local Governments and to superimpose this extravagant Medical Council in these times of universal depression is quite unwarranted.

It is late in the day, taking stock of Indian conditions, to withhold recognition from the medical licentiates of

the various medical schools of India as they are handiwork of the Government of India only.

The analogy of the British Medical Act must be strictly followed in the sphere of granting automatic registration to all those medical practitioners in India who have been practising medicine in India for not less than five years prior to the passage of the Indian Medical Council Act.

The Medical Council must be a wholesale elected body and its president must be elected. Recognition and registration must be on a purely reciprocal basis and no foreign degree should have the right of priority over any other in point of recognition and registration.

The British diplomats and degree-holders shall submit to the same conditions and regulations as those of any other country and unless there is equal reciprocity to all Indian medical degrees and diplomas allowed by the British Medical Council in matters of medical registration in Great Britain, they must be compelled to hold Indian medical degrees and diplomas to enable them to practise in India.

The independent medical profession of India should have the dominant voice in the deliberations of the Council and justice and fair-play to all countries must be the slogan of the Indian Medical Council. Equality and fraternity must be fostered among all medical practitioners of various grades and status in India as it is in Great Britain and the continent of Europe and America.

To cut away a large slice of the independent medical profession of India in the shape of Indian Medical Licentiates being barred by the Indian Medical Register is impolicy itself, especially in a measure avowedly meant to foster *spirit de corps* in the medical profession.

To treat the medical graduate as a sort of "serphi illuminati" of the medical profession is an unjust invidious distinction in India as the licentiates alone constitute the bulwark of medical relief in India.

Before passing the Bill into an Act of Legislature, it must be referred to a Select Committee who must take the consensus of Indian independent medical opinion and go deeply into the question and vogue, obtaining in various countries of the world about the effective control of medical education and registration and law of reciprocity extant in various countries.

To precipitate a measure of such a magnitude, for the common weal or woe of the country without adequately studying the special needs and conditions of India and its unique position as a vast country with a live indigenous medical system and leave out of consideration votaries of healing, aggregating about eighty per cent of the Indian medical relief system, is a short-sighted measure in itself.

To aggravate the already stumbling proposition by excluding medical licentiates who form 90 per cent of western medical relief in India is to stultify the very purview of the Bill.

To placate the Medical Council of Great Britain, do not rush the Bill, for God's sake, through Legislative Mill into an Act without due deliberation being accorded to the momentous issues raised in this necessarily cursory memorandum and it is enthroning error and usurping authority to enact it without anticipating and providing for or against these skeletons in the Indian cupboard,

Original Articles

MIDWIFERY IN ANCIENT INDIA

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.

Calcutta.

IX.

ABORTION.

Caraka describes the under mentioned factors as causes of abortion.—

1. Squatting position of the mother on an uneven ground or on hard seats.
2. Non-observance of the calls of nature. Voluntary stoppage of the normal functions of the body, e.g., urination, defaecation and expulsion of flatus.
3. Excessive or hard labour.
4. Excessive intake of hot or pungent food-stuffs.
5. Insufficient food. Mal-nutrition.
6. Physical injury to the body.
7. Frequent observance of water-falls or deep wells.
8. Driving in an old hackney carriage.
9. Loud and threatening sounds.

गर्भीपघातकरास्त्वमे भाषा भवन्ति । तद्यथा । उत्कटविषमस्यान-
कडिनासनसेविन्या वातमूत्रपुरीषवेगानुपरुन्धत्या दारुणानुचितव्यायाम-
सेविन्यास्तौक्ष्ण्यमातिमात्रसेविन्याः प्रमिताशनसेविन्या गर्भी श्वयतेऽन्तः
कुक्षेः । अकाले वा संसते । शीघ्री वा भवति । तथाभिघातप्रपीडनैः
श्वभ्रकूपप्रपातदेशावलोकनैर्वाऽभौक्ष्य मातुः प्रपतत्यकाले गर्भः ।
तथातिमात्रक्षौभिर्योमैर्यानिन । अप्रियतिमात्रश्वणैर्वा । प्रततोत्तान-
शयिन्याः पुनर्गर्भस्य नाभ्याश्रया नाङ्गी कण्ठमनुवेष्टयति ।

Caraka Samhita, IV. viii.

Susruta adds the young ages of the parents (mother below 16, and father below 25 years of age) as another cause and says :—

If from the causes mentioned before, abortion seems imminent, then she complains of pain in the uterus, the loins, the thighs, and

the hypogastric regions, and discharge of blood occurs. In this condition, cold water is to be sprinkled; cold bathing, and application of cold ointments prescribed; she should drink cold milk after having boiled it. If the movement of the fœtus be often, prescribe milk and boiled (*Utpala*). If the discharge continues, heat and pain are complained of at the sides and the back; hæmorrhage, retention of urine and difficulty in passing flatus occur. When the fœtus moves from one part of the abdomen to the other, the digestive system is paralysed. Then you should use cool and oleaginous preparations. If much pain is complained of in the uterus, prescribe.—*Mahasaha* (*Terumnus labialis*), *Ksudrasaha* or *mugani* (*Phaseolus trilobus*), glyceirrhiza, *Goksuri* (*Tribulus terrestris*), and *Kantikari* (*Solanum xanthocarpum*), boiled in milk with sugar and honey. If the quantity of urine excreted becomes scanty, use infusion of *Darbhadhi* (*Imperata arundinacea*) group. In cases of obstruction of fœces and flatus you should prescribe assafœtida, *souvarccala* salt, garlic, and *Vaca* (*Acorus calamus*) as infusion. If excessive bleeding occurs, use the mud of houses, *Manjista* (*Rubia cordifolia*), *Dhataki* flowers (*Woodfordia floribunda*), *Navamalika* (*Jasminum sambac*), *manasila* (red arsenic), raisin, and *rasanjana* (stibium) powdered and, after being mixed with honey, to be sucked by the patient. Or she may take the bark of the twigs of *Nyagrodhadi* (*Ficus Indica*) group well-pressed; or *Utpaladi* (*Nymphaea stellata*) group formed into a paste to be taken with milk. She may also be given the *kalka* of *Kaseru* (*Scirpus kysoor*) *Srngataka* (*Trapa bispinosa*), and *Saluka* (roots of *Nymphaeaceæ*) with milk; or the fruit juice of the *Yajnadumbura* or *Ficus glomeratus*, infusion of its root, mixed with milk; or give her the juice of *Nyagrodhadi* (*Ficus*) group and *sali* rice mixed with ginger and honey internally, or to be applied to her body, spread over a cloth. If there is no hæmorrhage, and only pain is complained of, prescribe glyceirrhiza, *Devadaru* (*Pinus deodara*), and *Payasya* (*Mimusops Indica*) boiled in milk; or prescribe the infusion of *Asmantaka* (*Coleus aromat*), *Satavari* (*Asparagus racemosus*) and *Payasya* (*Mimusops Indica*); or she may take the above infusion with the infusion of *Vidari* (*Ipomœa digitata*) group; or let her take the infusion of the following drugs *Vrhati* (*Solanum Indicum*), *Kantikari* (*Solanum xanthocarpum*), *Utpala* (*Nymphaea stellata*), *Satavari* (*Asparagus racemosus*), *Sariva* (*Ichnocarpus frutescens*), *Payasya* (*Mimusops Indica*), and glyceirrhiza.

तत्र पूर्वोक्तैः कारणैः पतिष्यति गर्भे गर्भाशयकटीवड्छन्नवस्ति-
शूलानि रक्तदर्शनञ्च तत्र शीतैः परिषेकावगाहप्रदेहादिभिरुपचरे-
ज्जीवनीयशृतक्षीरपानैश्च गर्भस्फुरणे सुहृस्मृष्टस्तत्सम्भारणार्थं क्षीरमुव-
पलादिसिद्धं पाययेत् । प्रसंसमानेसदाहपार्श्वपृष्ठशूलान्मृगदरानाहमूल-
संज्ञाः स्थानात् स्थानञ्चोपक्रामति गर्भे कोष्ठे संरम्भस्तत्र स्निग्धगीताः
क्रियाः । वेदनायां महासहानुद्रसहामधुकश्वदंश्चाकण्टकारिकसिद्धं
पयःशर्कराक्षौद्रमिश्रं पाययेत् मूलसङ्गे दर्भादिसिद्धं ।

आनाहे हिङ्गुबीर्बललज्जनवचासिद्धं । अत्यर्थं स्रवति रक्ते
कोष्ठागारिकागारमृत्पिण्डसमझाघातकोकुसुमनवमालिकामैरिकसर्ज्वरस-
रसाञ्जनचूर्णं मधुनावलिह्यायथानाभं न्यग्राधादित्वक्प्रवालकल्कं वा
पयसा पाययेदुत्पन्नादिकल्कं वा कशेरुशृङ्गाटकशालुककल्कं वा शृतेन
पयसोडुम्बर फलीटककन्दकाथेन वा शर्करामधुमधुरेण शालिपिठं
न्यग्राधादिस्वरसपरिपीतं वा वस्त्रावयवं योन्यां धारयेत् । अथाष्ट-
शोणितवेदनायां मधुकदेवदारुपयस्यासिद्धं पयः पाययेत तदेवाश्मन्तक-
शतावरीपयस्यासिद्धं विदारिगन्धादिसिद्धं वा वृहतिहयोत्पलशतावरी-
सारिवापयस्यामधुकसिद्धं वैवं क्षिप्रमुपक्रान्ताया उपावर्त्तन्ते रजो
गर्भश्चाप्यायते ।

Susruta Samhita, IV. x.

If treated in this way, abortion is prevented and pregnancy continues to advance. After the cessation of the discharge, prescribe *Dumbara* (*Ficus glomerata*) fruit boiled in milk. If the time of delivery be suppressed, prescribe wheat-paste (without ghee and salt) as of the *Kodrava* group, *Uddalaka* etc., to be taken as many days as the number of months of pregnancy. If acute pain is complained of in the bladder and in the abdomen, use digestive medicines and old treacle or whey. If the passages be contracted by eccentric *Vayu*, then the pregnancy would continue beyond the full term of delivery, and the foetus dies in uterus. In such cases, try mild oleaginous medicines. Prescribe juice of *Utkrosa* bird and wheat paste with a large quantity of ghee. For seven nights, let her take *Masakalaya* (*Phaseolus Roab.*), sesame, with infusion of unripe *Bael* (*Aegle marmelos*); or let her take *Kukatha* pulse (*Dolichos uniflorus*) with honey and *asava* of flowers. If still undelivered beyond proper time, then let her strike with a pestle on rice kept in a wooden mortar; or she may

be allowed to drive in a carriage on an uneven ground. If the foetus becomes dried by *Vaya*, the uterus does not distend the abdomen, the foetus moves slowly, and in such cases use nourishing diet, as milk or meat juice. If by the deranged *Vayu*, the sperm and ova, *i.e.*, semen and blood, be deranged, then instead of the formation of the foetus, abdomen becomes simply tympanitic, and sometimes that condition subsides by itself. If it thus subsides, the common people say that the foetus has been stolen by *Nāgameya*. But sometimes it remains in an undeveloped condition, then it is called *Nāgodora*. In such cases you should treat her by mild olenaginos medicines.

व्यवस्थिते च गर्भे गव्येनोदुस्वरशलाटुसिद्धेन पयसा भोजयेत् ।
प्रतीते लवणस्नेहवज्ज्वारिभिर्यवागूभिर्बृहत्तलाकादीनां पाचनियोपसंस्वृता-
भिरुपक्रमेत यावन्तो मासा गर्भस्य तावन्त्यहानि । वस्त्युदरशूलेषु
पुराणगुडं दीपनीयसंयुक्तं पायशेदरिष्टं वा । वातोपद्रवशृङ्गीतत्वात्
स्त्रोतसां लीयते गर्भः सोऽतिकालमवतिष्ठमानो व्यापद्यते तां मृदुना
स्नेहादिक्रमेनोपचरेत् । उल्कोशरससंसिद्धामनल्पस्नेहां यवागूं पाययेत् ।
माषतिलविल्वशलाटुसिद्धान् वा कुल्याषान् भक्षयेन्मधु माध्वीकं चानु-
पिवेत् सप्तरात्रं कालातीतस्थायिनि गर्भं विशिष्यतः सधान्यमुदूखलं
मूषलेनभिऽन्यादिषमे वा यानासने सेवेत । वाताभिपन्न एव शुष्यति
गर्भः स मातुः कुक्षिं न पुरयति मन्दं स्पन्दते च तं हृहनीयैः पयोभिर्मां-
सरसैश्चोपचरेत् । शुक्रशोणितं वायुर्नाभिप्रषन्नमवक्रान्तजीवमाधापयत्यु-
दरं तत्कदाचिद्यदृच्छयोपशान्तं वैगमेयापहृतिमिति भाव्यन्ते । तमेव
कदाचित् प्रलियमानं नागोदरमित्याहुस्तत्रापि लीनवत् प्रतिकारः ।

Susruta Samhita, IV. x.

A list of medicines to check bleeding and discharges in each month of pregnancy:—

First month—*Glycirriza*, *Soka vija* (seeds of *Tectona grandis*);
Payasya (*Mimusops Indica*), *Devadaru* (*Pinus*
devadaru).

Second „ —*Asmantaka* (*Coleus aromaticus*), black sesame,
Manjistha (*Rubia cordifolia*), *Satavari*
(*Asparagus racemosus*).

Third „ —*Vrksadani* (*Vanda Roxburg*), *Payasya* (*Mimu-*
sops Indica), *Utpala* (*Nymphaea stellata*), *Sariva*
(*Albizia julibrissin*).

- Fourth Month—Hemidismus root, *Sariva* (*Ichnos fruit*), *Rasna* (*Vanda Rox.*) *Padma* (*Nelumbium speciosum*), glycerrhiza.
- Fifth „ — *Vrhati* (*Solanum Indicum*), *Kantikari* (*Solanum xanthocarpum*), *Kasmari* (*Gmelina arborea*), *sunga* bark, and ghee of milky trees.
- Sixth „ — *Prsniparni* (*Uraria lagopoides*), *Vala* (*Sida acuta*), *Sigru* (*Moringa pterygosperma*) *Svadamstra* (*Tribulus terrestris*), *Madhuparni* (*Tinospora cordifolia*).
- Seventh „ — *Srngataka* (*Trapa bispinosa*), *Visa* (*Nymphæ stem*), *Draksa* (raisins), *kaseru* (*Scirpus kysoor*), glycerrhiza, sugar.
- Eighth „ — *Kapitha* (*Feronia elephantum*), *Vrhati* (*Solnum Ind.*), *Bael* (*Aegle marmelos*), *Patola* (*Trichosanthes dioica*), sugar cane. *Pindaluka* (*Dioscorea globosa*) root and milk.
- Ninth „ — Glycerrhiza, *Ananta* (*Hemidismus indicus*), *Devadaru* (*Pinus devadara*) boiled in milk.
- Tenth „ — *Sunthi* (*zingiber officinale*) and *Payasya* (*Mimusops Ind.*) boiled in milk.

अत उर्द्धं भासानुमासिकं वक्ष्यामः ।

मधुकं शाकवीजञ्च पयस्या सुरदारु च ।

अश्मन्तकस्तिलाः कृष्णास्ताम्रवर्णा शतावरी ॥

वृक्षादनी पयस्या च लता चोत्पलसारिवा ।

अनन्ता सारिवा राम्नापद्मा मधुकमेव च ॥

वृहत्थी काश्मरी चापि क्षीरिशुक्लास्त्वचो घृतं ॥

पृश्निपर्णी वला शिग्रु श्वदंष्ट्रा मधुपर्णिका ।

शृङ्गाटकं विसं द्राक्षा कशेरु मधुकं सिता ॥

वत्सै ते सप्त योगाः स्युरर्द्धश्लोकसमापनाः ।

यथासंख्यं प्रयोक्तव्या गर्भस्त्रावे पयोयुताः ॥

कपित्थवृहतीविल्वपटोलेक्षुनिदिग्धिकाः ।

मूलानि क्षीरसिद्धानी पाययेद्विषगृष्टमे ॥

नवमे मधुकानन्तापयस्यासारिवाः पिबेत् ।

क्षीरं शुद्धीययस्याभ्यासिकं स्याद्वृष्टमे हितम् ॥

सत्तीरा वा हिता शुद्धी मधुकं सुरदारु च ।

एवमप्यायते गर्भस्तीत्रा रुक् चीपशाम्यति ॥

Suśruta Samhita, IV. x.

If after a delivery, the next delivery occurs after six years, then the child becomes short lived. To treat any disease during pregnancy, prescribe emetic and purgative medicines with sweet and acid food ; and with her meals and drinks, mix mild corrective medicines, which should be mild, sweet, and must not injure her pregnancy. Other mild measures may be tried if they be not contra-indicated by the pregnancy.

निवृत्त प्रसवायास्तु पुनः षडभ्यो वर्षेभ्य उर्द्धं प्रसवमानाया नार्थ्याः
कुमारोऽप्यायुर्भवति ।

अथ गर्भिणीं व्यध्युत्पत्तावत्यये ऋद्ग्रेन्द्रधुरास्तेनान्नोपहितेनानुलोम-
येच्च संशमनीयञ्च मृदु विदध्यादन्नपानयोरश्रीयाञ्च मृदुवीर्यं मधुरप्रायं
गर्भाविरुद्धञ्च गर्भाविरुद्धञ्च क्रिया यथायोगं विदधीत मृदुप्रायाः ।

Suśruta Samhita, IV. x.

There are four kinds of combinations to strengthen the body and sharpen the intellect. These are called *Prasa*. One of them may be prescribed for the child.

1. Gold Pulv., *Kustha* (*Saussurea Lappa*), Honey, Ghee, and *Vaca* (*Acorus calamus*).
2. *Matsaksaka* (Roots of *Amaranthus spinosus*, *Sankhapuspi* (*Conscora decussata*), Honey, Ghee and Gold.
3. *Arkapuspi* (*Gynandropsis Pentaphytta*), Honey, Ghee, Gold, *Vaca* (*Acorus Calamus*).
4. Gold Pulv, *Kaitarya*, *Sweta* (*Myrica Nagi*), (*Ipomæa digitata*), *Durva* (*Cynodon dactylon*), Ghee and Honey.

भवन्ति चान्न

सौवर्णं सुकृतं चूर्णं कुष्ठं मधु घृतं वचा ।

मत्स्याक्षकः शङ्खपुष्पी मधु सर्पिः सकाञ्चनं ॥

अर्कपुष्पी मधु घृतं चूर्णितं कनकं वचा ।

हेमचूर्णानि कैटयः श्वेता दूर्व्या घृतं मधु ॥

चत्वारोऽभिहिताः प्रासाः श्लोकाङ्गेषु चतुर्ष्वपि ।

कुमाराणां वपुष्मैर्धावलबुद्धिविवर्धनाः ॥

इति सुश्रुत आयुर्वेदशास्त्रे कान्दिके प्रथमेऽध्याये समाप्तम् ।

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Treatment of the Child.

If the baby be diseased, you should take into account the previous health of the baby, the nature of the disease, symptoms, etc. The circumstances of time, place, strength of medicaments, etc., should also be considered. The medicines prescribed for a child should be sweet, light, cold, and good-smelling, for sweetness is much liked by children and is well-adapted to their condition. If treated in this way, the baby would gain in strength, colour and longevity. These rules are to be observed up to the youth of the child.

If the child be breast-fed, mild medicines in proper doses may be given to the mother or nurse with milk and *ghee*; but if the child lives on milk and rice, both the nurse and the baby are to be administered medicines. If the child takes as food, rice, etc., the baby alone is to be given medicines internally.

Doses of medicine.—If a breast-fed child is more than a month old, then the proper dose of medicine would be as much as could be retained on the two digits. If the child lives on milk and rice, then the dose of the medicine in the form of *kalka* would be about the size of a plum-seed. If the child lives on rice alone, the dose of the medicine would be about the size of a plum.

तंषु च यथाभिहितं मृदुच्छेदनौघमौषधं मातया क्षरपस्य क्षीर-
सर्पिषा धात्र्याश्च विदध्यात् क्षीरान्नादस्यात्मनि धात्र्याश्चान्नादस्य कषया-
दौनात्मन्येव न धात्र्याः । तत्र मासादूर्द्ध्वं क्षीरपायाङ्गुलिपर्व्वहययङ्ग-
सम्मितामौषधमात्रां विदध्यात् कोलासिसम्मितां कल्कमात्रां
क्षीरान्नादायकोलसम्मितामन्नादायेति ।

Mode of administration of medicines.—The medicines may be administered to a child suffering from *sannipatic* diseases in the form of a *kalka* applied to the breast for the first three days of the fever. If two *dosas* unite, *ghee* is beneficial. When sick, to allay thirst, the child must not be often suckled. Emetics and purgatives are not to be tried in diseases of children unless urgently called for to meet an emergency. If by the decay of the brain matter, the bone around the anterior fontanelle becomes depressed, and if the child becomes thirsty, and appears miserable in appearance, then prescribe *ghee* boiled with *ksira* or *Asvagandha* (*Withania Somifera*) to be used internally when cold, and externally by rubbing; cold water should be sprinkled on the child to rouse it. When by deranged *vayu*, the umbilicus becomes tender, and flatulence

occurs, the disease is called *Tundi*. Treat that disease by medicines which cure *vayu*, in the form of oleaginous drinks, vapour and ointment. If the rectum be inflamed, use medicines to cure the complications of bile, especially by *Rasanjana* both internally and externally.

There are three groups of medicines recommended to be used to cure diseases, to increase the strength, and to sharpen the intellect of the child in the three stages of their growth.

येषां गदानां ये योगाः प्रवक्ष्यान्ते ऽगदङ्गराः ।

तेषु तत्कल्कसंलक्षो पाययेत् शिशुं स्तनौ ॥

एकं ह्ये त्रीणि चाहानि वातपित्तकफज्वरे ।

स्तन्यपायाहितं सर्पिरितराभ्यां यथार्थतः ॥

नच दृष्ट्याभयादत्र पाययेत् शिशुं स्तनौ ।

विरिकवस्तिवमनानृते कुर्याच्च नात्ययात् ॥

मसुलुङ्गक्षयाद्यस्य वायुस्तत्त्वस्थि नामयेत् ।

तस्य तृड्देन्ययुक्तस्य सर्पिर्मधु रवैः शृतं ॥

पानाभ्यञ्जनयोर्गो ज्यं शीताम्बुहेजनन्तथा ।

वातेनाशपितां नाभिं सरुजां तुण्डिसंज्ञितां ॥

मारुतघ्नैः प्रशमयेत् स्नेहस्त्रे दोषनाहनैः ।

गुटपाके तु बालानां पित्तघ्नीं कारयेत् क्रियां ॥

-रसाञ्जनं विशेषेण पानालेपनयोर्हितं ॥

1. Breast-fed child.—*Ghee*, *Siddharthaka* (white Mustard), *Brahmi* (*Herpestis monniera*), *Vaca* (*Acorus calamus*) *Satavari* (*Asparagus racemosus*), *Pippali* (*Piper longum*), *Payasya* (*Mimusops Indica*), *Sariva* (*Ichnocarpus frutescens*), *Haridra* or turmeric, *Apamarga* (*Achyranthus aspera*), *Mamsi* (*Nadostachys jatamansi*), *Kustha* (*Saussurea lappa*), *Saindhava* (rock-salt) as infusion.

2. Rice and Milk-fed child.—*Glycerrhiza*, *Vaca* (*Acorus calamus*), *Pippali* (*Piper longum*), *Citraka* (*Plumbago zeylanica*), *Triphala* (3 *Myrobalans*) as infusion.

3. Rice-fed child.—*Dvipancamuli* (*Dasamula*, a tonic medicine prepared from the roots of ten plants), *Ksira* (*Mimusops Indica*), *Tagra* (*Tabernaemontana coronaria*), *Bhadradaru*, (*Cedrus deodara*), *Marica* (*Piper nigrum*) Honey, *Vidanga* (*Embelica Ribes*), *Draksa* (*Vitis vinifera*), and the two varieties of *Brahmi* (*Herpestis monniera*) as infusion.

क्षीराहाराय सर्पिः पाययेत् सिद्धार्थकवचामौषधस्यापामार्ग-
शतवरोधारिवान्नाक्षीपिप्यलीहद्रिकुष्ठसैन्धवसिद्धं क्षीराहाराय
मधुकवचापिप्यलीचित्रकत्रिफलामिहमन्नादाय द्विचमूलीक्षीरतगरभद्र-
दारुमरिचमधुबिहङ्गद्राक्षाह्वित्राह्वासिद्धं । तेनारोग्यबलमेधायुषि-
शिरोर्भवन्ति ।

If the child starts suddenly, if it is afraid and cries often, if it scratches its mother's or its own body with its nails, if it grinds the teeth, groans and yawns, stares upwards contracting the eyebrows, if it bites the lips or lather collects at the mouth, if the child is constipated and the faeces be hard, and cries pantingly during defæcation, if the boy becomes weak and discolored by late nights, if smell of fish, *chaya* (shadow) and lice be perceived in the child's body, and if the child does not take up mother's breast easily as before : all these are symptoms or signs of the bad influence of the planets. These will be described in details in the sequelæ.

अथ कुमार उद्विजते त्रस्यति रोदिति नष्टसंज्ञो भवति नखदशनैश्चाक्षी-
मात्मानञ्च परिनुदतिदन्तान् खादति कूजति जृम्भते भुवो विक्षिपत्यूर्ध्वं
निरोक्षते फेणमुद्धमति सन्दष्टौष्ठः क्रूरो भिन्नामवर्चा दीनात्तंसरो निशि
जागर्त्ति दुर्बलो स्नानाङ्गो मत्स्यच्छकुन्दरिमत्कुनगन्धो यथा पुरा
धात्याः स्तन्यमभिलषति तथा नाभिलयतीति सामान्येन ग्रहोपष्ट-
लक्षणमुक्तं विस्तरेनोत्तरे वक्ष्यामः ।

General directions for the management of children.—Enjoy the touch of a child. Don't disturb the child's sleep suddenly, for that produces fear in the child's mind. Never raise the child high up in the air, or on the lap or shoulder for the *vayu* is deranged thereby. Never make the child sit, for child may be haunch-backed. The child is to be soothed down with thousands of sweet words, and anger must not be indulged in when dealing with children. In this way without any mental trouble, the child will flourish day by day, and will be courageous, healthy and cheerful in spirit. The child is always to be protected from draught, sun, lightning, deserts with scanty vegetation, low lands, shadowy places behind houses, poisonous and irritating plants, and other circumstances which may cause injury to the child. The child is never to be kept in an unclean place, in the air, in hot or airy sites, in the rains in an uncovered place, in a place full of dirt or smoke, or in watery damp land. C-0. In Public Domain. Gurukul Kangri Collection, Haridwar

So long as the child requires milk, only milk of cows and goats should be given in proper quantity. After six months the child can take boiled rice as a light nourishment, and they must be kept inside the house and carefully watched.

बालं पुनर्गर्भसुखं गृह्णीयान्नचैनं तर्जयेत् सङ्घसा न प्रतिबोधयेद्दि-
क्षासभयात् सङ्घसा नापहरेद्दृत्तिपेदा वातादिविधातभयाच्चोपवेशयेत्
कौलभयात् नित्यं चैनमनुवर्त्तेत प्रियशतैर्गजिवांसुः । एतमनभिहत-
मनास्त्वभिवर्द्धते नित्यमुदग्रसत्वसम्पन्नो नीरोगः सुप्रसन्नमनाश्च
भवति । वातातपविद्युत्प्रभापादपलताशून्यागः रनिम्नस्थानगृहच्छायादिभ्यो
दुर्यहोपसर्गतश्च बालं रक्षेत् ।

नाशुचौ बिभृजेद्बालं नाकाग्निं विशमे न च ।

नोष्णमारुतवर्षेषु रन्ध्रुमोदकेषु च ॥

क्षीरमात्मयतया क्षीरमाजं गव्यमथापि वा ।

दद्यादास्तन्य पर्याप्तेर्वर्जितानां बौद्धा मातृया ॥

पश्मासञ्चेनमन्नं प्रासयेत्तु हितञ्च नित्यमवरोधरतश्च स्यात् कतरञ्च
उपसर्गभयात् । प्रयत्नतश्च ग्रहोपसर्गेभ्यो रक्षा बाला भवन्ति ।

Abnormal Presentations.

The ligaments of the uterus become loose by—

1. Sexual intercourse during pregnancy.
2. Fatigue caused by excessive riding or driving in a carriage or on horseback.
3. Fall or injury or pressure on the gravid uterus.
4. Abnormal attitude while sitting on a chair or lying in a bed.
5. Fasting.
6. Voluntary stoppage of urination and defæcation.
7. Unhealthy diet consisting of bitter, pungent and caustic food-stuffs.
8. Dysentery, indigestion, vomiting, and by the use of strong purgative medicines.
9. Abortion artificially induced, etc.

All these causes produce derangements of the *Samana vayu* (nervous equilibrium), which consequently causes disturbance in the uterus, the liver, the spleen and the intestines. Thus movement is set up in the stomach, and the *Apana vayu* becomes inert and the following symptoms occur.—Pain in the sides of the body,

the bladder, the head, and the vagina, colic pain, and retention of urine. The foetus is thus destroyed. The foetus also dies if there be premature discharge of blood.

If the foetus be alive, and when after the intra-uterine growth is completed, it does not present itself at the outlet in proper position, or if its descent is obstructed by the *Apana vayu*, then the foetus is called *Mudha garbha*.

These abnormal presentations are described to be of four kinds.—

1. *Kila*.—If the hands, feet and the head be directed upwards, and the trunk, pointing downwards, causes obstruction to its descent like a *kila* (wedge), the presentation is called *Kila*. It is the breech presentation of modern authors.

2. *Pratikhura*.—If one hand and one leg comes out with the head, and further descent of the foetus is stopped, the presentation is called *Pratikura*.

3. *Vijaka*.—If one hand only presents with the head, the presentation is known as *Vijaka*.

4. *Parigha*.—If the os be obstructed by the foetus like a bolt (*parigha*), the presentation is called *Parigha*. This corresponds to the transverse presentations of modern writers.

These are the four principal presentations. There may be other varieties of presentations, as when one or both the lower extremities are the presenting parts. In some cases the *sakhi* (thigh), trunk and pelvis obstruct the passages in a slanting direction. Sometimes the chest, back, or the sides of the body may obstruct the delivery of the foetus. In other cases the head is obstructed at the margin of the os, and one or two hands may engage the passages. In rare cases the body is doubled upon itself, and the hands, feet and head present simultaneously. In a few cases one foot is in the outlet of the mother, and the other is directed towards the rectum of the foetus. These are roughly the eight varieties of abnormal presentations. Of these varieties the last two are beyond treatment. In the other cases too if the patient loses consciousness, or be troubled with spasms, or suffer from *Yoni-samvarana* or *Makkal* (abscess in groin) disease, or dyspepsia, or loss of memory, then the surgeon is advised not to treat such cases.

As a fruit falls from its stalk in time by natural causes, so the foetus is delivered in time by the separation of the placental attachment. And as fruits fall sometimes untimely, by the agency of worms, wind, and other external causes, so the foetus is also delivered before time if some untoward accidents occur. Up to the

fourth month, it may often escape out through the discharges. From the fourth to the sixth month the fœtus is formed and is delivered.

Symptoms of a dead fœtus.—The woman who when pregnant cannot raise her head and who becomes shameless and wanting in decorum and who feels cold; when blue veins appear on her body; possibly she is suffering from the effect of the death of the fœtus, and she may die eventually. If the foetal sounds become inaudible, and if the signs of pregnancy disappear, if she complains of fœtid smell during respiration, if colic pains be set up in the womb, then the fœtus has died in the womb (uterus). The fœtus generally dies when the mother is afflicted with mental or accidental pain and also when she becomes diseased. If she is accidentally be killed by a (*vastamara* leopard, and if the foetal pulsations be detected, then the fœtus is to be extracted by means of laparotomy without delay. Others explain that the term *vastamara* means “a contracted pelvis”. In such cases laparotomy is advised to be performed to save the child.

Treatment.

The examination of the dead fœtus is a difficult procedure. For in such cases you are to be guided by the sense of touch alone and the uterus is in relation with many important organs, *e.g.*, the vagina, the liver, the spleen and the intestines. The hand is the sole instrument to be used, and you are to perform the various manipulations, such as pushing up (*utkarsana*), drawing down (*akarsana*), version or displacement (*sthanaparibartana*), cutting (*utkartana*), piercing (*bhedana*), tearing (*chedana*) pressure (*pidana*), straightening (*rjukarana*), laparotomy (*vidarana*) and other surgical operations by means of your hand alone. Therefore the permission of the husband must be secured first, and then you should proceed cautiously with your work.

The presentations of the fœtus in obstructed labour are described to be of eight kinds. But in nature there are three ways in which the fœtus is said to be obstructed (*Garbhasanga*), that is, when the head, or the shoulder or the pelvis is the presenting part at the os in a slanting direction. If you find the fœtus be living try to deliver it with care.

1. *Expectant treatment.*—

If you be unsuccessful in your attempt, you should repeat the *mantra* or the charm of the sage Cyavana :

इहामृतञ्च सोमञ्च चित्रमनुञ्च भामिनि ।

उच्चैःश्वशञ्च तुरगा मन्दिरे निवसन्तुते । etc.

Suruta Samhita. V. xv.

2. Medical treatment :—

At the same time you must administer her proper medicaments. Vagbhata recommends us to rupture the foetal membrane to expedite delivery.

Position of the Patient.—If the foetus be diagnosed to be dead in the uterus, the mother is to be laid down in a slanting position. The head should remain in a plane higher than that of the pelvis, and the thighs are to be flexed. The pelvis is to be raised up by a bundle of clothes underneath her waist or pelvis.

3. Manual interference. —

Then prepare a paste of Dhanvan (*Grewia asiatica var. vestita*), *Salmali* (*Bombax malabaricum*) juice, *Giri mrittika* (red ochre), and *ghee*, and annoint the outlets of the patient and the finger of the surgeon with it, and try to extract the foetus. If the legs present, pull by the legs steadily downwards and then deliver the child. If only one leg presents, you introduce the hand in the uterus, bring down the other leg and then deliver it. In the breech presentation, you must push the breech upwards and try to bring down the legs. In the transverse presentations, the lower half of the body is to be pushed upwards and the head is to be brought down to engage the os, and then deliver the child. In the shoulder presentations, the shoulder is to be pushed up and the head is to be brought downwards to the os. If one of the arms be the presenting part, you are to push the shoulder of the same side upwards and bring down the head to engage the os. The other two forms of presentations cause difficulty in the delivery.

4. Application of instruments :—

If you find it difficult to extract the child by your hands, try your instruments. But if the child be living, never use any instrument to kill the child, for in such cases both the mother and the child may die.

In cases of difficult delivery, use the Round-headed *Mandalagra* instrument or the Finger-knife to open the skull of the foetus, and then deliver gradually the flat cranial bones by extraction with a *Sanku* or crotchet. The foetus is then brought downwards, taking a hold on its chest or axilla. If you cannot pierce the head of the foetus, try to deliver it by a hook applied to the

orbital cavity or inside the cheeks. If the arm and the shoulder obstruct delivery, the shoulder with the arm is to be cut away, and the child then delivered. If the abdomen of the foetus becomes swollen by the formation of gas in the intestines as the result of decomposition setting in, you should open the abdomen first, extract the intestines, and then deliver the foetus (*Eviseration*). The mother is always to be saved by removing with the knife any presenting part that proves an obstacle to the delivery. The various kinds of presentations are caused by the deranged *vayu*, and expert surgeons should treat cases accordingly. Never neglect a dead foetus in the uterus of its mother, for she may die by the cessation of respiration. Always use the Round headed instrument in preference to *Vrddhipatra* for the latter instrument may injure the soft parts of the mother.

If any other accidents occur to the foetus, causing its death, you should extract it soon in the ways mentioned above. You may ask one of your assistants to press the sides of the mother and you deliver the foetus by the hand. Then make the patient shiver and rub her shoulders. In extracting foetus, always apply oil in the vaginal canal.

After treatment.—After the dead foetus had been extracted, sprinkle hot water on the body of the mother and apply oleaginous medicines in the vaginal outlet for the prevention of pain and to make the parts soft. Then to soothe her pain and to rectify any *dosa* or defect, let her take the following powder: *Pippali* (*Piper longum*) and its root, *Sunthi* (*Zingiber officinale*), cardamom seeds, *assafœtida*, *Bhargi* (*Clerodendron Siphonanathus*), *Yamani* (*Carum copticum*), *Vaca* (*Acorus calamus*), *Ativisa* (*Aconitum heterophyllum*), *Rasna* (*Vanda Roxburghii*) and *Cavya* (*Piper chaba*). These are to be powdered and taken with or without ghee; or their decoctions may be prescribed for her. She may then drink the decoction of the bark of *Saka* (*Tectona grandis*) tree, *assafœtida*, *Atibisa* (*Aconitum ferox*), *Fatha* (*Stephania hernandifolia*), *Katuki* (*Picrorrhiza kurooa*) and *Gajapippali* (*Scindapsus officinalis*).

Then let her take oleaginous preparations for three, or five, or seven days; or prescribe *rasayana* or *ar sta* during the nights. Prescribe decoctions of *Sirisa* (*Albizzia Lebbeck*) or *Arjuna* (*Terminalia arjuna*) as a gargle. If any other accidents occur, treat them accordingly. When the body is thus purified, let her take cooling foods; apply fomentation and oily applications every day

without getting displeased. Boil milk with medicines to rectify *vayu*, and let her take it for ten days. Let her take meat juice for ten days similarly. The treatment should be continued for four months; and then she will be purified, and become strong and healthy. Even then she may use *Vala* (*Sida cordifolia*) oil for application to the vagina, the mamma and to other parts of the body, and she may take it internally also.

Instruments.

In the Ayurvedic books, we find many instruments described under blunt and sharp instruments in surgical practice. As surgery included midwifery, the instruments to be used for its practice are also described under them. These instruments are :—

1. Tubular instruments for piles.
2. *Jonivraneksana* or vaginal speculum.
3. *Uttaravasti* or urethral, vaginal and uterine tubes, Catheters.
4. Instruments for fumigating uterus.
5. Cupping instruments.—*Ghati-yanta*, *Alabu*, *Srngu*.
6. Swab probes.
7. *Garbha sanku*.—foetus or traction hook.
8. *Yujna-sanku* or Midwifery Forceps.
9. Abdominal Binder.
10. Suture materials
11. *Mandalagra* or round-headed knife.
12. *Vrddhipatra* knife.
13. *Mudrika* or Finger-knife.
14. *Suci* or needles.
15. *Antarmukha*, *Ardhacandra*.
16. Gold and silver knife to cut the navel cord.

As all these instruments have been described in detail with copious illustrations in the "*Surgical Instruments of the Hindus*" Vol. I and II, no description of the instruments are given here. Only we point out that the Midwifery forceps were known to the ancient Hindus as *Vesmi sanku* or *Yugnasanku* and these were recommended to be used for the extraction of living foetus. This instrument consists of two hooks joined together:

संबद्धशङ्ख युगलो वेष्टिमशङ्ख प्रकीर्तितः ।

मूढगर्भाहतो सोऽपि प्रयोज्या गर्भशङ्ख कः ॥

DYSENTERY AND ITS TREATMENT IN SIDHA SYSTEM

BY

DR. V. SIVASUBRAMANIAN,

SOUTH INDIAN SIDHA RESEARCH LABORATORY,
DHARAPURAM.

It is very well known to the medical world that Dysentery is a specific infectious disease caused by many bacillæ and characterised by pain in the abdomen, slight fever, frequent passages of blood and mucus and constant desire for stools.

In the South Indian System (Sidha) of treatment, I have a confidential method of treatment (for dysentery) which I found written on palmyra leaves by our ancients of India in Tamil as poems. The medicine "Cooling Oil" was prepared in my South Indian Sidha Research laboratory and found effective in all the cases. This oil is not only effective in dysentery but also effective in ushna rogas, constipation, dyspepsia, diarrhoea, spermatorrhoea, piles, anaemia, disorders of the urinary tract and acts as a general tonic in all conditions of debility. The preparation of this best oil is told herewith.

In dysentery 'Cooling Oil' is advised to be given first and then Poongavi Sinduram. In some chronic cases Poongavi sinduram and Padikara Sinduram are used. Silajit pills are given to children for dysentery with fever. To stop the frequency of stools "Kattuvadi Pills" are found effective. The patient is advised to be at rest in bed. Hot applications or cooling oil application may be given if there is pain in the abdomen. Diet should be very simple. He can take Milk in small amounts, egg albumen, barley or rice water.

The composition of various medicines detailed in the course of treatment for dysentery.

(1) *Poongavi Sinduram :-*

Tamil	Latin or English	Quantity
Poongavi	Bolus Armenia Ruba	Equal quantities
Padikaram	Alum	grind together.

1932.]

(2) *Cooling Oil* :—

Tamil	Latin or English	Quantity
Ponnanganni juice	...	4 measures.
Karaisalanganni juice	Eclipta Erecta	4 "
Vallarai "	Hydrocotyle asiatica	4 "
Puliarai "	Oxalis corni culata	4 "
Manathakkali "	Solanum Nigrum	4 "
Agathi "	Agathigrandiflora juice	4 "
Vengayachary	Onion juice	4 "
Elumi champala "	Lime juice	4 "
Orilaithamarai	Viola Suffruticosa	4 "
Elaneer	Cocoanut water	4 "
Amanekkennai	Castor oil	12 "
Koshtam	Sauss. Urea lappa	4 Palams 3/4 gram
Aelarasi	Cardamum	4 " 3/4 gram
Jeeragam	Cumin seeds	4 " 1/2
Amukkaran	Withania Coagulas	4 " 3/4 gram
Jatikkai	Nutmeg	4 " 3/4 gram
Jatipatri	Arillus of the Nutmeg	4 "
Kadukkai Thol	Jetminilia Chebula	4 "
Athimathuram	Liquorice or Gly- cerrhiza Glabra	4 " 3/4 gram
Rojamokku	Rose	4 " 1/2
Karkadagasingi	Rhus Succedanea	4 "
Kattalai juice	Aloe Indica juice	4 measures 1/2 gram

Boil them till no traces of water are left behind.

Dose :—10 to 30 drops for children and 1 to 1½ drachms for adults in cow's milk or in decoction of cumin seeds. For dysentery, it is advisable to take it in butter milk, if there is no fever, daily thrice. If there is fever, take this in cow's milk or in breast milk. In other cases and as a tonic, this may be taken daily twice in cow's milk,

(3) *Padikara Sinduram* :—

Padikaram	Alum	10 tolas
Lingam	Chinnabar (Frying)	1 tola.

Dose :—For adults 10 grains in honey daily twice.

Also used for Pittaroga, Vomiting, Sleeplessness, malaria, Pittajvra and Ushna jvra.

(4) *Silajit pills* :—

Silajit Vasmam	Silajit Vasmam
Amayottu Vasmam	Tortoise shell Vasmam
Vilampisin	Gum of the wood apple tree.

Grinding with the decoction of wood apple gum.

Size of the pill :—Like pepper (Milagu). Thrice daily for Children.

(5) *Kattuvadi Pill* :—

Jatikai	Nutmeg or (Myristica)
Machakai	Galls
Jatipatri	Myristica officinalis
Kirambu	Cloves
Koshtam	Sauss. Urelappa
Athimathuram	Liquorice
Athividayam	Aconitum Heterophilum
Apini	Opium (Purified)
Vilampisin	Gum of wood apple tree

Take equal parts ; powder and insert the powder into the pomegranate half riped fruit ; kavacha it with cowdung, burn and grind it in the decoction of Jathikai and then make pills of kumni size,

I hope my learned brothers would try to prepare and use the cheapest medicines in their treatment for the welfare of human lives and encourage our Indian System of treatment.

GHEE AS FOOD AND MEDICINE IN AYURVEDA

BY

BHISHAGWARA V. SUBBA RAO, A.M.A.C.

(*Post graduate student, Indian Medical School, Madras.*)

Vernacular names :—

Latin.—Butyrum deparatum
 Eng.—Clarified butter.
 Bengali—Ghee, Ghrita.
 Mar.—Tup.
 Guj.—Ghee.
 Tel.—Neyyi.
 Can.—Tuppa.
 Par.—Rokhnejadi.
 Arabic—Samau, Dahanulbakar.

Synonyms in Sanskrit :—

Gritam	(that which melts)
Ajyam	(that which is used in Food)
Havih	(that which is poured in Fire)
Sarpih	(that which spreads)
Purodas	
Pavitram	(that which is sacred)
Navaneetakam	(that which is prepared from butter)
Ajam	(goats' ghee)
Toyadam	
Vanhibhiogyam	
Pidham	
Amritam	(that which is like nector)
Abhigharah	
Homyam	(that which is used in homa)
Ayuh	(that which increases life)
Tejasam	
Jeevaneeyam	(that which prolongs life)
Bhojanarham	(that which is used as food)

Definition of a Sneha dravyam :—

The dravya is generally regarded as snehana (oily) when it is liquid (द्रव) (Fluidity is moistening), (सूक्ष्म) subtle (subtlety is the quality by which a thing can penetrate into the capillaries and channels of the body), (स्थिर) stable, (विरिध) oily (oiliness imparts a gloss and acts as an emmolient tonic, and cosmetic), (पिच्छिल) slimy (sliminess is vitalising, tonic, heavy as regards digestion and tends to produce Kapham and brings about the adhesion of fractured bones), (गुरु) heavy (heaviness produces langour, increases excrements, and is tonic, pleasing and flesh building), (शीत) cold (coldness is pleasurable, exercises styptic virtues, alleviates epileptic fits, thirst and a burning sensation of the body and arrests perspiration), (मंद) not pungent, and (मृदु) soft (softness is the opposite of sharpness i.e. it neither begets burning and suppuration nor arrests secretion.)

Superiority of ghee in the four varieties of sneha dravyam :—

The four kinds of sneha dravyam are ghee, fat, marrow and oil, Among those, ghee is considered to be the best because :—

1. Ghee when mixed with other drugs has got the ability of assimilating their properties, without losing its own.
2. When mixed agreeably in proper ways with proper substances, it becomes thousand kinds of energy and operates in thousand ways.
3. It is sweet (ghee and honey occupy the highest place in the list of all sweet articles, S. S. ch. XLVI), mild (not fiery) and is used even from the beginning of one's birth.
4. It is comparatively lighter than the rest of snehams.
5. It has got all the properties of a sneha dravyam.

Occurrence :—

Ghee is prepared in two ways ; one, by boiling butter, which occurs after churning the curd and another way is by clarifying butter formed out of churning milk.

Chemical Composition :—

Proteins in grms.	Fat in grms	Carbohydrate	Calories for oz.	Vitamines A B C D
—	23.10	—	—	++ + - - +

Varieties of ghritam :—

Eight varieties of ghee are mentioned in Nighantus. They are (1) cow's ghee, (2) ghee of a she goat, (3) ghee of a she buffalo, (4) ghee of a she camel, (5) ghee of an ewe, (6) ghee of a mare, (7) ghee of a she elephant, (8) ghee of a woman. Among this group, Cow's ghee is considered to be the best according to many authorities. But according to Rajanighantu (सर्पिर्महिषमुत्तमं) buffalo's ghee too is considered best. The general use in the country is only buffalo's ghee.

Properties of ghee (prepared from curd) in general :—

Ghee is sweet in Rasa (taste). You may as well ask, is it really sweet when tasted? But according to Ayurveda it is not necessary that it should be sweet to the taste. If any dravyam is pleasant, proves comfortable and contributes to the life preservation of man, keeps his mouth moist, and increases the quantity of bodily kaphm it is called sweet. It is saumya or cooling in its essence and potency, and sweet in digestion. It is said to be mild.

*Its prabhava or uses on various diseases :—*It slightly increases the slim secretion of the organs and acts as a lubricating moistner, quenching all undue heat. It is appetising and subdues Vayu and Pittam. It improves memory, intelligence, complexion, voice, personal beauty, amiability of features and the principles of strength in the body. It is beneficial for the juicy or liquid elements in the body, vitalising, spermatopoetic and heavy. It is foremost of oily substances. It improves the eyesight, increases the quantity of bodily Kapham, and the duration of life. It is sacred and is regarded as an appeaser of adverse fate. It eliminates poison from the body and wards off the invasions of monsters and demons. When mixed agreeably with the proper substances, it becomes endued with a thousand kinds of energy and operates in a thousand ways. Nighantu Ratnakara and Saligrama Nighantu say, it proves efficacious in Udavarta, insanity, epilepsy, colic, fever (Purana) and distention of the abdomen from suppression of stool and urine, also in kshata kheena, erysepelas, Burns, wounds etc. It destroys Ajeerna, indigestion, phthisis, Raktapitta, and Rakta dosha. It is beneficial in eye diseases, uterine disorders, head diseases, dropsical swellings, Niramavatajwara, Amadosha, and its prakopa,

fever due to indigestion and grahani, it is beneficial to those that have dry bodies.

Cow ghee :—

Cow's ghee is sweet in digestion and cold in its potency. It subdues the deranged Vayu and Pittam and serves to eliminate poison from the system. It improves the eyesight and possesses the excellent tonic and invigorating properties. Cow's ghee is the best of all kinds of ghee. According to Dhanvantari Nighantu, it improves Agni, strength, prolongation of life. It is beneficial for children and old people and in kshataksheena, Parisarpa and in surgery. It improves complexion, delicacy of the constitution. Raja Nighantu says, it subdues Vayu and Sleshma, reduces tiresomeness, gives pleasure to the heart and is beneficial in Pitta. It is the best of all ghees, and is endowed with innumerable properties. Ayurveda sutram says "गोघृतं सर्वरोगहरं", cow's ghee cures all diseases. According to Saligram Nighantu, it is Rasayanam and spermatopoetic.

Buffaloe's ghee :—

It is sweet, heavy in digestion and proves remedial in haemoptysis. It is cooling and increases the quantity of bodily kapham and subdues the deranged Vayu and Pitta. Raja Nighantu says that buffaloe's ghee is the best of all. He says, it improves memory, complexion, strength and beauty. It subdues Vayu and Pitta, is beneficial in disorders of grahani, and eye-diseases. It improves mandagni and such ghee, if newly prepared, gives pleasure to both body and mind. According to S. Nighantu, it is sweet in reaction and spermatopoetic.

Ghee, its varieties and their properties :—

1. Newly prepared Ghee :—It is beneficial in loss of strength, in meals, and in tarpanam, in eye diseases, kamala and Pandu, Phthisis and diseases of Pitta. It is also beneficial in tiresomeness. It is contraindicated in cases of fever, Vibandha, Visuchika, indigestion, disgust for food, Panatyaya and in Madatyaya,

2. *Kshira ghritam* :—Butter, churned out of a thickend milk and clarified, is astringent and proves beneficial in eye diseases, haemoptysis, epileptic fits and vertigo.

3. *Ghruta Mandam*.

The condensed upper stratum of clarified butter acts as a laxative, cures aching pain in the vagina, cures eye-diseases in the head

and is recommended to be used *as an errhine, an enema or as eye drops,*

4. Old ghee (ghee that is not new);

Old ghee is laxative and pungent in digestion. It subdues the three bodily humors. It proves curative in epileptic fits, obesity, insanity abdominal dropsy, fever, chemical poisoning, oedema, hysteria, and in aching pain in the vagina, ears, eyes or head. It is appetising and is recommended to be used as eye drops and enema and for strenutatory purposes. It proves curative in Timira dyspnoea, catarrh, fever, cough, epileptic fits and kushtam, in cases of poisoning, mental abberation, hysteria ascribed to the influence of malignant planets. According to Raja Nighantu, it is a cleansing and healing agent of wounds, improves longevity, memory, strength, complexion and delicacy. It is good in childhood, strength giving in middle and old ages. There is no better medicine in this world in point of medicinal properties than this.

Old ghee becomes superior in respect of its virtues and effects in consequence of its place (and vessel) in which it is kept.* Its taste becomes pungent and bitter. Ghee that is ten years old becomes possessed of a keen scent. That ghee, which (in consequence of its age) assumes the aspect of the solution of a lac, becomes possessed of very cooling properties. It becomes capable of dispelling all kinds of evil spirits and astral influences. Ghee that is olden is regarded as highly sanctified. Such ghee is foremost of the purgatives. There is nothing which ghee, that is a hundred years old, cannot effect. Such ghee, only seen, smelt or touched, dispels all calamities caused by evil spirits and malignant astral conjunctions (Ch. Chi. Ins.)

Kumbha grhitam—

It is ghee matured from eleven to hundred years, It is said to be possessed of the mystic potency of warding off the invasion of monsters.

Maha ghritam—

It is older than Kumbha ghritam. It is highly efficacious, sacred and specially curative in the diseases known as Timira. It acts as a prophylactic against the malignant influences of all

*Clarified butter that is kept in a vessel of Indian bell metal for ten consecutive days should be rejected as unwholesome.

evil spirits and baneful planets and *should be taken by men in whom Vayu predominates*. It subdues the deranged Kapham, and improves the strength and intellect.

How to use ghee as food and medicine :—

Ghee may be taken with rice, or with ointments and plasters or both or with meat or with milk or with curds or with gruel, or with barley or with soup or flesh, or with potherbs or with ordinary gruels or with those called *kamvalikas*, or with those called *khada*, or with flour of barley, or with cakes of sesame, or with limes, or with some semi-liquids as are licked up with the tongue, or with solid food or with liquids used for rubbing the body, or with enemata, or with things used as snuffs, or with washes or as colliria for the eyes.

Action of ghee on Vata, Pitta and Kapha :—

Ghee subjugates Pitta in consequence of its being possessed of the properties of sweetness, coolness, and mildness since Pitta is not sweet i.e. hot and fiery,

Ghee subjugates Vata in consequence of its being possessed of the properties of oiliness, heaviness and stability, since Vata is not oily i.e. dry, light, and visadam.

Sweetness, oiliness, heaviness, coldness and sliminess form the specific properties of Kapham. Ghee, the best of all sweets, which is possessed of the same properties as the Kapham, respectively increases the sweetness, oiliness, heaviness, coldness and sliminess of the latter with the help of similar properties of its own.

One should not take ghee when one's Pitta only has been excited, especially when one's Pitta as exciting with indigested food has been excited. Ghee taken under such circumstances would spread over the whole body and bring about death itself.

When the Pitta increases, one should lick the ghee ; when the Vata increases, one should drink it. Licked, it extinguishes the Pitta, a little of it entering the system. Drink, it attacks Vata, at the same time it does not extinguish the digestive fire.

Why oily dravyam is essential for a body :—

A sneha dravya or an oleaginous substance forms the essential factor of the physical organism, and the self-conscious animated element (which contributes strictly to its vitality and makes life possible) abound in oleaginous principles. Both

are consequently in constant want of a sneha. These oily substances are enjoined to be administered in food, drinks as well as in Anuvasana etc.

Ghee as Food :—

In India, ghee is one of the commonest articles of food of a man from his cradle to grave. Western medical practitioner knows very little of ghee, and that too as a fat. Dr. J. Neil Leith in his book "Dietetics in warm climates" writes why ghee is an essential food in India. He says, "If the staple article of food is wheat, there may be a deficiency of fat, this should be made up by taking butter or ghee. Rice does not contain enough fats and therefore the rice diet must contain butter, ghee or vegetable oils." If what Dr. Leith says is true, why should we take ghee with fatty foods like flesh etc. That is not the real reason. If we look into our ancient sastras we find, that one should take food that is oily. "Food that is oily while being eaten causes perspiration, when the eating is over it excites the digestive fire. Such food is soon digested, causes the Vata to move in its natural directions. It renders the growth of body stable. It generates strength as also excellence of complexion." (Ch. Vim. Ch. 1.)

It will not be an exaggeration to say that for the want of this knowledge western doctors are the cause of enlargement of liver and other diseases of children in large numbers, by generally prescribing those biscuits and artificial foods which are devoid of this oily substance. We generally see in our houses that although children can digest cakes or sweets cooked in ghee they are not able to digest even supposed light nursery biscuits of the market. This is a thing every body ought to investigate. Use of ghee as food and medicine begins from the time of birth. Immediately after birth, the child's mouth should be cleansed with ghee and rock salt. For the first three days after birth, it should be fed on its handful of ghee and honey, the best of sweets. And it is a well known fact that mothers generally give more ghee for children with their food. As Dr. Leith says, ghee is mostly consumed by Brahmins in India, which may be considered as one of the factors for their being highly intelligent, as is supported by our Nighantus' घृतेन बह्विदुः. The ghee is such an important article of diet that a proverbial saying goes to say that "ऋणं कृत्वा घृतं पिबेत्"—one should drink ghee even by making debts.

1. Rice boiled and cooked with ghee or any such fatty substance as well as with meats forms a rich and heavy food which helps to build up new tissues and imparts strength and rotundity to the body.

2. The meat which has been fried with ghee and then boiled in warm water and afterwards prepared dry with condiments should be considered as a toothsome, exhilarating, emulcent food, though heavy of digestion. It imparts firmness to the limbs and increases a relish for food, improves the appetite and intellect, builds up fresh tissues, gives rotundity to the frame and produces an increased quantity of semen and ojas in the organism.

3. Confectionery fried in ghee has an agreeable taste and aroma, is light, spermatopoetic, and tonic, subdues Vayu and invigorates the eye sight.

4. The variety of shulyam (cabot) prepared with ghee should be regarded as light, appetising, agreeable, relishing, beneficial to the eyes and cooling in their potency. They also subdue the Pittam and are pleasant to the taste.

5. The variety known as ghrita puras (articles of food prepared by putting ghee) is strength-giving and agreeable. It subdues Vayu and Pittam, is spermatopoetic and heavy of digestion and tends to create new flesh and blood.

(To be continued.)

Reports of Societies etc.

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ALL INDIAN MEDICAL CONFERENCE

Constitution of Medical Council

MUST BE ON POPULAR METHOD OF SELECTION

"We hope and trust that members of the Assembly will not forget that the members of the Medical profession insist that the methods of education and instruction to the students, the control of the conduct of the medical practitioners, the method in which the public health and sanitary administration should be carried out should be under the supervision and direction of a medical council formed upon a popular method of selection," said Dr. B. C. Roy, Chairman of the Reception Committee of All-India Medical Conference at the conclusion of the Conference at the Town Hall. The Conference came to a close after a dinner party attended by 500 people, including all leading members of medical profession organised by the Reception Committee. The delegates.

Dr. B. C. Roy in conclusion addressing the delegates said :—

A POPULAR COUNCIL

DR. B. C. ROY'S FAREWELL REMINDER

The Eighth Session of the Indian Medical Conference is about to close. Meeting and parting are the two incidents with which we are all too familiar. We come together on the tip-toe of expectations. We hope to enjoy the full benefits of our association and we have a corresponding regret at the time of parting. So is the case in the present instance. Delegates from different parts of Bengal and of India have come—some have travelled long distances—to take part in the deliberations of the Conference. I, on behalf of the Reception Committee, thank these delegates for the trouble they have taken in coming here and giving us the benefit of their experience and sacrifice. Their anxiety to meet us only shows how keenly they feel about the problems that face the medical profession to-day. We are going through rapidly changing circumstances. In common with the rest of the people, the members of the medical profession have to face them with faith, hope and courage. The Conference has discussed the various questions affecting the medical profession and the public—notably the Indian Medical Council Bill. They have come to some definite resolutions and decisions regarding it. It is to be expected that the views of the Conference will be given due weight by the members of the Assembly who are now considering the bill. We hope and trust that members of the Assembly will not forget that the members of the medical profession insist that the methods of education and instruction to the students, the control of the conduct of the medical practitioners, the method in which the public health and sanitary administration should be carried out, should be under the supervision and direction of a medical council formed upon a popular method of selection. If the civil administration of the country is, as it is going to be handed over to the people, the medical department of the administration also should be based upon a system of popular control.

A DEFINITE DECISION

TWO TYPES OF PRACTITIONERS

The Conference has also come to a definite decision regarding the existence amongst us of two types of practitioners, of two types of students, of two systems of instruction. They have, by a very large majority, come to the decision that there should be only one system, there should be only one group amongst the medical practitioners. This oneness does not signify that every member of the profession would have the same mental and physical equipment to do his work. It does not indicate that there should be no difference in the instruction given in

one institution as in the other. It does not mean that all practitioners would be brought down to the same dead level. It only means this that all medical students should have the same opportunities to go to the highest rung of the ladder, without being designated all through his life as if he were an inferior person. The inferiority complex should disappear from the profession. The social and economic conditions of the people will soon operate in a way which will adjust the practitioners in different groups but watertight compartments should not be made in which practitioners should be kept segregated one from the other. The Conference has agreed to regard this group of "Native Doktor" as a relic of the past system of medical administration, which, I am glad to say, is fast disappearing. The Conference also gave expression of its views regarding the method in which the medical sanitary administration of the country, Medical Research Institutes and the Central Indian Research Fund Association are being conducted by the present Government. We have deliberated on these series of topics for three days and have come to definite conclusions.

SCIENTIFIC SECTION

CREDITABLE ACHIEVEMENTS

While the Conference has been discussing the topics of general interests to the profession, the Scientific Sections have done their own work very successfully. Over 89 papers on different subjects were discussed at meetings presided over by experts in the various departments. I would thank the members who contributed various papers and those who took part in discussions and particularly those who guided them for giving the Conference their help. They have done the work at tremendous sacrifice and at a very short notice and we hope and trust that in future the Scientific Section will bulk large in the future sessions of the Conference.

THE EXHIBITION

The Exhibition forms a very remarkable feature of the Conference. At a very short notice the Secretaries have been able to gather together a large number of representative firms and institutions to exhibit their products which shows us how India is capable of helping in the treatment of diseases and to what extent we have still to develop in comparison to the manufacturers of the West. This exhibition cannot but be regarded as a very interesting and helpful feature of the Conference.

DR. K. S. ROY

PRIMARILY RESPONSIBLE FOR SUCCESS

Before I conclude I have got to express on behalf of the Reception Committee of the Conference my thanks to those members of the profession who

at considerable sacrifice of time and at great expense and trouble have helped towards the success of the Conference. First of all and foremost amongst them I have to name the Secretary, Dr. K. S. Roy with whom is associated the name of our Co-Secretary, Dr. Santiram Chatterjee. Dr. Kumud Sankar Roy has been mainly responsible for the success of the Conference in more senses than one. He not only has ideas in his head but he gives shape to them and with his friends and followers puts them into practice and he succeeds. I cannot but name a few of the other members. Dr. Jatindra Nath Basu has given his untiring labour for the success of the Conference; Dr. Amulya Ukil and Dr. Hemendra Nath Ghose, have worked in their way untiringly for the success of the Conference. Dr. Rajat Sen and Dr. Krishna Prasad and Dr. Anil K. Chakravarty have kept up long hours at night in order to see that the Conference becomes a success and the guests and the delegates get the comforts which are their due. Dr. Hemendra Nath Roy have done yeoman's service in making the exhibition a success. I have to thank Lt. Bejoy Prasad Singha Roy, Minister of Local Self-Government, Bengal for associating himself with the activity of this Conference and opening the exhibition. I now ask you to pass on to the next item of business—the consideration of the Bill—The Bill of Fare devised, prepared, distributed by the caterers, "The Imperial Restaurant", I will ask you seriously to consider the Menu, to earnestly make researches in the various items therein and the ingredients with which they are prepared.

THE RESOLUTIONS

IMPROVEMENT OF MEDICAL EDUCATION

At the final sitting of the All-India Medical Conference following resolutions were passed :—

That this Conference is of opinion :—

(a) that the preliminary qualification for admission to all medical institutions should be the intermediate science examination certificate of different Indian Universities or its equivalent,

(b) that it is urgently necessary to improve the equipment and standard of education in the Medical Schools so as to approximate the same to that of the Medical Colleges of the University standard.

(c) that in the meanwhile the Conference strongly recommends :

(1) that the training of the licentiates should be improved by

(i) extending a period of instruction in the Medical Schools to at least 5 years throughout India.

(ii) the better equipment of schools, and

(iii) the appointment of better qualified teachers therein.

(2) that facility should be given to the Licentiates to enable them with further supplementary training to appear at the University examinations for medical degrees, and

(3) that a Committee of eminent medical men be appointed by Government to go into the whole question and report at an early date.

11. (a) That this Conference is of opinion that the Universities of India should take immediate steps to make Pediatric medicine a subject for special study with a definite curriculum.

(b) that the Conference is of opinion that it is high time that provincial and local administrations should pay immediate attention to organising health Associations throughout the country for purposes particularly of spreading knowledge of general hygiene and maternity and child welfare and provide necessary funds for these activities of theirs and making popular associations an essential point about these activities.

(c) that this Conference is of opinion that immediate provision should be made in Medical College and schools for the scientific study of indigenous therapeutics and pharmacology by (1) establishing clinics and (2) organising research work in indigenous drugs.

COMBATting MALARIA

14. (1) That the Govt. be asked to help financially and by expert advice all such village organisations as are working on scientific lines for combatting malaria in Bengal and other places.

(2) That intensive anti-malaria work be undertaken in selected areas to serve as models for all centres.

(3) That Govt. should encourage field work for the identification of the carrier species of mosquitoes in India and for the study of the habits of such mosquitoes.

15. That to procure adequate funds for the purpose of anti-malaria work this Conference urges upon the Government to earmark the sale proceeds of the Cinchona Alkaloid to be spent for the purpose of anti-malaria work alone.

16. That adequate and prompt anti-malaria work should be undertaken by the Health Department with honorary and voluntary organisations and where such are not available by local practitioners.

17. That there should be efficient co-ordination between Sanitary Department of the Government with various others of its Departments which may interfere with the health of the population, by their respective works.

18. That this Conference urges upon the Government to allow all plans for the construction of railway, excavation of canals, erection of dams or Bunds etc. to be submitted to the Sanitary Department to ascertain their views before giving final sanction.

FEEs FROM HOSPITAL PATIENTS

21. That this Conference is of opinion that the practice of realising a fee from hospital patients would operate as a great hardship upon the

poor sufferers and urges upon the authorities to abandon such practice as far as possible.

22. That the recommendations made by the Conference which met at Simla in July, 1930 to discuss the location of the Central Research Institute of India with regard to the constitution of the Governing Body of the Indian Research Fund Association be given effect to at an early date.

23. That this Conference learns with regret that no representatives of the independent medical profession has been taken on the Governing Body of the All-India Institute of Hygiene, Calcutta and that the Government be requested to add at least two distinguished members of the independent medical profession thereto.

24. That a Copy of the above resolutions be forwarded to the Governing Body of the Rockefeller Foundation, the Government of India and the Governing Body of the Indian Research Fund Association and the Director of the Hygiene Institute.

25. That the All-India Medical Conference is of opinion that the system of taking in post graduate hony. research workers in all the research Institutes of India, as exists in other scientific Depts. of the Universities of India as well as in Europe and America, should be introduced in India as early as possible. It is also of opinion that research scholarship from the Indian Research Fund Association should be given to meritorious workers who may subsequently be appointed as paid workers.

The conference thanked the Corporation for having permitted the use of the Town Hall for holding the Conference.

Next meeting of the Conference will be held at Patna during the X'mas.

DELEGATES ENTERTAINED

Messrs. B. K. Pal & Co. were 'at home' to the delegates in the afternoon at their Garden House at Dum Dum. Sir Hari Sankar Pal and other representatives of the firm were all attention to the guests who were shown round the factory and shown the various processes of the manufacture of the products of the premier firm. Guests passed quiet an enjoyable afternoon at the garden house.

The exhibition which is a special feature of the Conference drew a large number of visitors as on the previous days. The products of Messrs. B. K. Pal & Co., Messrs. Bengal Chemical and Pharmaceutical Works, Messrs. Bengal Immunity, Messrs. Proprietary Industries Co. who exhibited their product 'Iodemin' tooth paste, and tinctures, the various instruments imported by the Scientific Instrument Co. (a purely Bengalee firm), of Messrs. Adair Dutt & Co., the biscuits and kindred things manufactured by Messrs. P. Sett and Messrs. K. C. Bose & Co., drew the

special attention of all Foreign firms also occupied as prominent a place in the exhibition. Products of the well-known Nestle's Milk Co. Ltd., specially 'Lactogen' and Malted Milk were displayed prominently, and Dr. Naren Das representative of the firm did his best to impress the products upon the special attention of the visitors. Products of Messrs. P. Beiersdorf & Co. Hamburg, who are represented in Calcutta by Francis Klein, such as Lenco, Trico and Hansa plasts and a new degitalis production 'Pandgal' also drew attention. This is by no means exhaustive list of the exhibition which owes its success to the untiring efforts of Dr. Hemendra Nath Roy.

NONE BLESS MEDICAL BILL

Perverted Aims

REJECT IF NOT MODIFIED

SEVERE INJUSTICE TO LICENTIATES

The proposed All-India Medical Council Bill came in for renewed and the most severe criticism at the second day's sitting of the All-India Medical Conference at the Town Hall.

Modifications of the Bill were urged with great emphasis and it was resolved that unless these amendments were adopted the medical profession in India would be justified in refusing to accept the Bill.

Sir Nilratan Sarkar, who presided, in asking Dr. Bidhan Chandra Roy to move the resolution referring to the Bill remarked that this was the resolution before the Conference.

Dr. Roy moved :

MAIN RESOLUTION

MEDICAL ASSOCIATIONS' VIEWS ENDORSED

That this Conference fully endorses all the recommendations of the Indian Medical Association in regard to the different provisions of the All-India Medical Council Bill. Particularly (a) regarding the Preamble of the Bill—so as to not only provide for the maintenance of a register of qualified practitioners but also to establish a uniform minimum standard of qualification for all the provinces of India ;

(b) regarding the composition of the Council, namely that the Council should have an elected President from the beginning and that the composition of the Council should be as follows :—

- (i) three persons to be nominated by the Governor General-in-Council ;
- (ii) one person to be elected by the provincial Committee from amongst members who have been elected to this body ;
- (iii) one person to be elected by the members of Senate or University Court of an Indian University.

(iv) one person to be elected by the medical practitioners resident in a province in India and registered in a provincial Medical Register and who possesses any qualification, granted or recognised by an Indian University or who possesses any recognised medical qualifications under amendment of Section 18 of this Bill.

(v) one representative of Licentiates registered in each provincial medical register.

(c) regarding reciprocity—the India Medical Council should be free to accept the medical degrees of those countries only which accord the same privilege of recognition to the Indian medical degrees and that the British degrees should not be automatically recognised by inclusion in the second schedule.

OBJECT OF THE BILL

PREAMBLE IN CLASH WITH SIR FAZLI'S STATEMENT

In moving the resolution Dr. Roy said that Sir Fazli Hossain, member in charge of the Bill, in his press interview had attempted to give a totally different version to the aims and objects of the Bill than what was contemplated by the preamble of the Bill. The preamble stated that the object underlying the Bill was to establish a uniform minimum standard of qualification to be recognised by the provinces in British India, whereas Sir Fazli was stated to mean that the Bill was for the purpose of recognition "by other countries as conforming to international standard."

The word 'international standard,' said Dr. Roy, did not convey any meaning at all. The Conference which was called by the Government in 1930 to discuss the Bill made it perfectly clear that the purposes of the Bill should be to put their house in order and develop their own system of instruction and their own method of examination in medicine.

CONSTITUTION OF COUNCIL

Proceeding Dr. Roy dealt with the constitution of the Council. The proposed bill, he said, sought to give a predominating majority to the Government. The Bill obviously affected the medical practitioners vitally and so they protested against a constitution which gave such a predominating majority to the Government.

MATTER OF RECIPROCITY.

The British Medical Act of 1889 laid down the principle of recognition of the degrees of those countries which gave equal recognition to the qualification of the registered medical practitioners of the United Kingdom. So it was essentially a question of reciprocity. And the question of recognition of Indian degrees was only a minor issue. British degrees should receive the same consideration at the hands of the India Medical Council as the British Medical Council would be disposed to accord to Indian Medical degrees.

INDIA AND ENGLAND.

GREATEST INJUSTICE TO LICENTIATES.

Capt. P. B. Mukherjee of Patna in seconding the resolution said that if the Medical Council in England on which the Medical Council was going to be modelled could do with 13 p. c. Government representation why the India Government should claim 41 p. c. and while in the former case the Universities had 71 p. c. representation, in India only 8 p. c. representation was offered to the Universities. Besides in England, a much smaller country, the size of the Council was 38, why should they not have a bigger body here? They should have a much more democratic body than the Bill proposed and run on lines like those of Great Britain.

And lastly the licentiates should be recognised by the Council.

Dr. A. D. Mookherjee said that the Bill by seeking to debar 25 000 licentiates who formed the largest section of medical practitioners and on whom devolved the major portion of work of rendering medical aid to the masses, greatest injustice was going to be perpetrated.

Dr. D. de Silva of Jubbalpur in supporting said that if they considered that the house they were asked to dwell in was inadequate, they had every right to refuse to enter it, nay, demolish it to the ground.

ANOTHER HALTER.

Dr. K. S. Roy in according his support to the Bill said the Bill had received the blessing of the General Council of Great Britain. The members of certain service who controlled the medical policy of the Government of India were in the good books of the General Council of Registration. So a Bill directed by people in charge of the medical administration commanded the approval of the General Council.

Further, the officialisation of the Council showed the hollowness of the character of representation of the non-official element. The constitution of the Council as proposed was highly objectionable. It was another halter round their neck and they should not fall into the trap.

GENESIS OF TROUBLE

Dr. N. N. Basu said that the trouble arose since one of their graduates within three months succeeded in getting into I. M. S., when it was found that Indians could compete to tighten the screw more firmly so as to curb the opportunity of acquisition of money and prestige by Indian medical practitioners.

Dr. Thasker of Bombay, Dr. Ram Sing of Amritsar, Dr. Krishnan of Madras, Dr. P. C. Roy, Rajat Sen and others supported the resolution which was passed unanimously.

Also following resolutions were passed by the Conference :—

PROPOSED AMENDMENTS

ESSENTIAL FOR SUCCESS OF BILL.

That in view of the fact that the amendments proposed by the Indian Medical Association are fundamental to the successful working of the Bill, this Conference adopts them and authorises the Indian Medical Association and other medical associations in India to take necessary steps to get these amendments accepted by the Legislative Assembly.

REJECT IF NECESSARY

This Conference is further of opinion that unless these amendments are adopted, the medical profession would be justified in refusing to accept the Bill.

MISLEADING STATEMENT.

This Conference is of opinion that the statement to the press given by Sir Fazli Hossain is misleading as the object underlying the Bill as mentioned in the Preamble is to establish a uniform minimum standard of qualification to be recognised by the provinces in British India and not (as stated by Sir Fazli Hossain) for the purpose of recognition "by other countries as conforming to international standards."

This Conference strongly disapproves the custom of demanding countersignature of the Civil Surgeon on certificates granted by the registered independent medical practitioners, as it casts a great slur on non-official members of the profession.

Those provincial Governments who have not yet introduced the system of honorary Visiting Medical Officers in Govt. hospitals and in teaching institutions should forthwith introduce the same.

This Conference urges upon the Govt. the immediate necessity of placing the mofussil hospitals under the charge of honorary Medical Officers, particularly in the interest of economy.

BUY SWADESHI

This Conference emphatically urges on all medical practitioners in India to encourage the use of drugs, sera, vaccines, surgical dressings, surgical instruments and other appliances of Indian manufacture as far as possible.

This Conference urges on the profession and public the necessity of encouraging the development of drug farming in India.

PRELIMINARY QUALIFICATIONS

This Conference is of opinion :—

(a) that the preliminary qualification for admission to all medical institutions should be the intermediate science examination certificate of different Indian Universities or its equivalent.

(b) that it is urgently necessary to improve the equipment and standard of education in the Medical Schools so as to approximate the same to that of the Medical Colleges of the University standard,

(c) that in the meanwhile the Conference strongly recommends ;

(1) that the training of the licentiates should be improved by

(i) extending a period of instruction in the Medical School to at least 5 years throughout India.

(ii) the better equipment of schools, and

(iii) the appointment of better qualified teachers therein,

(2) that facility should be given to the Licentiates to enable them with further supplementary training to appear at the University examinations for medical degrees, and

(3) that a Committee of eminent medical men be appointed by Government to go into the whole question and report at an early date.

That this Conference urges the necessity on the part of Indian Universities to inaugurate education in Dentistry and secondly, that in the Indian General Medical Council Bill now before the Legislature a clause be added with regard to the registration of properly qualified surgeons.

Reviews and Notices of Drugs

— :o: —

TINEA INTERDIGITALIS.

Tinea interdigitalis, known commonly under various names such as ringworm, athletes' foot, gymnasium foot, dhobe's itch, Shanghai foot, etc., and caused by the fungus *Tricophyton interdigitalis*, is one of the most widespread of fungous diseases. Imbedding its spores into the tissues and multiplying readily, it affects not only the feet, but frequently the hands.

The application of Antiphlogistine dressings, which contain a high percentage of glycerine and other synergistic ingredients, exerting penetrating, absorptive and antipruritic effects, will be found very effective in allaying the irritation, itching and discomfort and prove a most valuable agent in combatting this condition.

THE DENVER CHEMICAL MANUFACTURING COMPANY,
163, Varick Street, New York, U. S. A.

THE JOURNAL OF AYURVEDA

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Population and Food.

PRESSING PROBLEM FOR INDIA.

Last year *The Indian Medical Gazette* published a note on the population and food problem of India. This is again referred to in the last issue of the *Gazette*, which says that the worst feature of the situation is that even the educated community have failed to realise the extreme urgency of the problem.

Everybody who knows the conditions under which the people of India live (the article continues) will agree that the population, as a whole, is badly nourished. This constitutes a chronic malady of India which is accepted as a normal condition, an unsatisfactory state of affairs which can be greatly improved by better methods of agriculture and by discarding wasteful customs, but the question remains whether those reforms, necessary, though they are, can ever constitute a radical cure unless they are combined with a restriction of the population. It is only too likely that if we could improve the food supply and eliminate waste, the population would very soon increase to such an extent that we should again be faced with the population problem.

There existed not many generations ago in England, and there still exists to-day in India, a portion of the population who oppose sanitation progress on the grounds that it is an interference with the workings of Nature. At this fatalistic attitude the sanitarians are horrified; yet to day the majority of them are adopting an equally fatalistic attitude with regard to the population question.

There is no need to worry, they say, for as certainly as night follows day, so will Nature adjust her balance.

We are interfering up to a point, but for some mysterious reason we must interfere no more. Surely, it is in this attitude that the inconsistency lies. It would be as logical to reverse their motto and say 'keep down the births and the deaths will keep down themselves' but as well as being inhuman, it would be entirely wrong. We must tackle both sides of the problem, or Nature will adjust the balance for us. But how? as she has done in the past by her ruthless methods, under-nourishment and disease working hand in hand.

Here the writer turns to the history of Ireland as evidence that the population of a country, when not affected by other important factors like war, disease, emigration, industrial development or artificial restriction, is ultimately limited only by the available food supply. The great potato famine forms a very graphic picture of what has actually happened in a country in which the people lived with no thought for the evils which result from a senseless increase in the population and without a corresponding provision for feeding the extra mouths.

The tragic story of the fate of the people when the potato famine came affords an example of the drastic action which had to be taken when dire necessity compelled the people to restrict the population so as to conform to the available resources of the country. Eventually, the population became stabilised at about four millions by the deliberate restriction of the number of births. The latest census of the Irish Free State shows that 80 percent of the males between the ages of 25 and 30 are unmarried, yet in spite of this, there is great anxiety because of overpopulation.

Have we any reason to believe that the same kind of disaster as happened in Ireland in 1816 will not occur in India if we fail to face the hard facts of human existence?

We need not look so far back nor so far afield as Ireland to appreciate the nature of our own problem. Every one of us has numerous examples before his eyes of the impossibility of giving children a reasonable start in life when the unfortunate young parents have to rear a family of five or six on an income which would barely support the father and mother in a proper state of nutrition.

It is essential to attack the root of the evil and this can only be done by teaching the people how to plan their lives in accordance with the dictates of reason. In India, more children find themselves embarked on the responsibilities of parenthood under conditions in which it is quite impossible for them to succeed. They and their infants are doomed to a despairing attempt to keep body and soul together. The same kind of struggle exists in the middle-class families, a more poignant drama because the actors in it realize that they have not had a fair chance.

We have never advocated contraception as the one solution of the problem, adds the *Gazette*. Our point of view is that certain hard facts have to be faced, and we have shown that some countries have achieved success by delayed marriages and celibacy, others by contraception.

It seems clear that the people of India are faced with three possible lines of action :—

The adoption of later marriages and celibacy ;

The practice of contraception ; or

The continued propagation of surplus infants with the inevitable result that the population will be restricted by disease, famine, and war.

The first and second methods seem to be the only satisfactory solutions and it is open to everyone to choose whichever of these is in keeping with his religious beliefs or inclinations ; there should be no dictation or compulsion of any kind.

There is usually a good reason for long established customs and it is quite likely that infant marriage was necessary and justifiable under the conditions which existed in ancient times. When war, disease, and famine levied a huge toll on the population, the best chance for survival of a family or race lay in the production of large numbers of offsprings at the earliest possible moment : but changing conditions call for changing customs and it is only those who adapt themselves to the existing environment have a chance of success.

The reluctance to investigate the whole problem is due in part to a failure to recognize the gravity of the situation, but it is due even more to the fatalistic view that nothing can be done except to let Nature take her course. Palliatives are prescribed from time to time when certain symptoms obtrude themselves, but no serious effort has yet been made to discover the real causes of the malady and to devise a rational course of treatment.

The question may be asked. Have the medical and other scientists any reason to believe that a remedy can be found? The reply is emphatically, yes. But only under certain conditions ; these are that the complicated disease should be thoroughly studied by competent experts working in close consultation with one another. Having made a diagnosis and agreed on a line of treatment, the specialists must convince the patient that their diagnosis is correct and persuade him to adopt the long course of treatment which is essential.

It is quite certain that the remedy will consist in education, especially of the boys and girls, but the system of education must be devised after a most careful study. The education must be directed towards the definite object of instructing the children in such a way that they will learn how to plan their lives so as to obtain the best chance of a satisfactory existence. The cure will take a long time, but the longer it is delayed, the more terrible

will be the problem which the future governments of India will have to face.

India is in much the same condition as Ireland was a hundred years ago, except that the problem of India is many times more vast, as we are dealing with three hundred and fifty millions of people instead of eight millions. What are we doing to prevent a tragedy from happening in India such as Ireland experienced during the potato famine? Failure of the monsoon, wars, great epidemics, these are the unpleasant remedies which Nature is sure to apply to a country with a population in excess of the food supply.

It has now been possible to increase the productivity of India to such an extent that 350 millions of people are able to live under better conditions than 200 millions used to do. It is within the bounds of possibility that even so many as the present 359 millions might live in a modest degree of economic well-being if production were increased and waste eliminated but is there any one so optimistic as to claim that 700 millions could gain a reasonable livelihood? Yet this is what we appear to be aiming at so long as we confine our attention to the elimination of preventable diseases.

Apart from the deliberate planning of human existence in a rational manner, the only important checks on population, as we have already said, are starvation, disease and war. If Nature is to be left in sole charge of the arrangements, then disease is just as kindly a method of controlling the population as famine or war. But seeing that the people of other countries have succeeded in achieving satisfactory results by applying their brains to the problem, it is surely worth while to see whether India cannot secure the same benefits. If this were done, hygiene and public health would come into their own, and they would achieve the same results in India as in other countries. The matter is urgent, and the more the delay in taking action, the more the difficulties that are to be faced.

Original Articles

THE USE OF MUSTARD IN AYURVEDA.

BY

KAVIRAJ D. N. ROY, M. SC.

CALCUTTA.

In Ayurvedic literature we find an extensive use of various oils for the treatment of diseases and also for general purposes. It is recommended for internal as well as for external application. As it is the mustard oil that is ordinarily used in Bengal, I propose to ennumerate here the different uses of mustard.

Mustard is of four kinds, (1) गौर सिद्धार्थ, (2) रक्त सिद्धार्थ, (3) राजिका and (4) कृष्णराजिका. But for all practical purposes, we may consider it as of two varieties only, viz. सिद्धार्थ or white mustard and राजिका or black (dark brown) mustard. When not otherwise mentioned, the black variety is used for external application and the white for internal use.

General use :—

(1) Use oil as a gargle everyday. It strengthens the jaws, prevents hoarseness of voice, develops the sense of taste, keeps the lips soft and makes the teeth strong. One who makes it a habit of taking oil-gargle, never suffers from tooth-ache and can chew very hard articles of food. It is also a sure remedy for sensitive teeth.

(2) Always keep your head moistened with oil. Then you will not have any headache, no baldness and no untimely falling off or greyness of the hair. And you will have sound sleep.

(3) Put a few drops of oil every day in your ears. You won't get lack-jaw and your sense of hearing will be highly developed.

(4) Rub oil well over the legs and feet. It soothes the body and strengthens the sense of sight. You will not get sciatica or gout or cracked sole and there will be no stiffness of the ligaments of the legs.

(5) Daily use of oil bath (अभ्यंग) makes a man's body firm and skin smooth and clean. He becomes more hardy and but

few signs of old age can be noticed in him. Oil cakes (powdered) are also rubbed over the body to remove dirt and to make the skin bright and complexion fair.

(6) Oil is also used as a vaginal douche in some disorders of the uterus and malformation of the vagina.

Besides these, mustard oil is largely used by the people of Bengal for culinary purposes.

External use :—

In cold and headache, mustard seeds are made into paste with water and applied in a thin layer over the forehead. It is a universal practice amongst the Ayurvedic physicians to recommend mustard oil for ordinary cases of Bronchitis, Asthma and other ailments due to ślesma. The oil mixed with a little camphor is warmed and rubbed well over the chest and back.

Charaka has recommended white mustard mixed with some perfumatory articles to be rubbed all over the body in Phthisis. He has also prescribed its vapour (as a bath) for chronic fever.

For inflammatory swellings, mustard is extensively used either alone or in combination with other medicines. According to Sarangadhara, mustard poultice promotes suppuration in an abscess. For ऊरुक्षय, make a paste of mustard and करंजबीज with cow's urine and apply (सु चि. ५.). For inflammation of the ears, make a paste of mustard and शजिना bark with water and apply. For glands and glandular swellings, Bagbhata recommends mustard plaster made with butter-milk. Mustard is also used for elephantiasis. Bagbhat mentions the use of mustard root for this purpose. For ordinary inflammation, Bagbhata recommends the application of old oil-cakes made into paste with cow's urine. For inflammation of the scrotum, take mustard and बच in equal parts, make it into paste with water and apply. Remove it if there is any burning sensation.

Mustard plaster and oil are particularly recommended for leprosy, urticaria, rash, eruptive fevers and in various other diseases of the skin. Charaka prescribes mustard seeds to be rubbed over leprosy wounds and also to be used as plaster (च. चि. ७). For वातरक्त, make a paste of mustard with milk and apply (च. चि. २६). Bangasena recommends white mustard for this purpose. Sarangadhara wants the paste to be made with mustard oil.

For ringworm, make a paste of white mustard with butter-milk and apply (वा. चि. १६).

In insanity, mustard oil and mustard powder are recommended by Bagbhata to be used as नख.

For ear-ache, apply mustard oil mixed with गुग्गुली.

For inflammation of the gums, Harita recommends mustard powder and salt mixed together.

So we see that mustard plaster or poultice is much used for leprous wounds and for various skin diseases. Now in all these cases Pitta and blood are vitiated. But mustard itself is hot and it aggravates blood and Pitta (cf. “कटूणं सार्धं पत्रैश्च रक्तपित्तप्रदूषणम्”—च. सू. २७). Therefore the irritant action of mustard is a contra-indication in diseases of the skin. Still how is it that mustard oil and seeds are recommended for diseases affecting Pitta and blood? The explanation will be found in the general principle of prescribing hot application for burns, etc.

Cf. “उष्णक्षिप्या रक्तस्य विलयनेन स्थानान्तरगमनात् हेतुप्रत्यनीकतेव”.

Internal use :—

Sushruta has mentioned white mustard as an emetic. As an emetic, Bagbhata also prescribes decoction of mustard mixed with powder of कुटजबीज.

For elephantiasis, Sushruta prescribes mustard oil (सु. चि. १६).

Charaka recommends mustard oil to be taken with rice in प्रमेह, i.e. in diseases of metabolism and of the kidneys.

GHEE AS FOOD AND MEDICINE IN AYURVEDA

BY

BHISHAGWARA V. SUBBA RAO, A.M.A.C.

(*Post graduate student, Indian Medical School, Madras.*)

(*Continued from our March issue*)

Ghee as medicine in general.

No western medical practitioner knows that ghee, inspite of its use as a staple article of food, is medicine in almost all diseases that human flesh is heir to. We have already studied its probhavam. The author of Ayurveda sutram has clearly

stated that "गोघृतं सर्वरोगहृत्" cow's ghee is curative of all the diseases. In the following pages we will try to prove that the above statement is quite scientific and rationale.

Ghee is being used as medicine both internally and externally. Internally it is used for drinking, licking, anuvasanam and nasyam. Externally it is used as Abhyangam, plasters, ointments and gandusham. Ghee, without any other thing added thereto, should be administered in the affections of the deranged Pitta (its action on Pitta is already explained), whereas it should be mixed with salt before use in the diseases due to the action of Vayu (why should we add salt?). Ghee when mixed with salt, succeeds in quickly oilifying the body, since mixed with salts, it acquires the virtue of expelling diverse kinds of secretions from the system, becomes soft without retaining the character for dryness, succeeds in penetrating the most subtle parts of the body, becomes warm and all pervading or extensively diffusive and with the admixture of Yavakshara and Trikatu in the affections of the aggravated kapha (we have already studied that ghee increases kapha, and that when it is mixed agreeably with the proper ordinances with the proper substances it becomes endued with thousand kinds of energy and operates in a thousand ways). Since yavakshara and trikatu are destroyers of kapha, ghee coming in contact with them assumes the property of destroying kapha.

Ghrita Panam :—Drinking of ghee is highly recommended for those that have constitutions characterised by a predominance of Vata and Pitta, that are desirous of strengthening their eyesight, that are wounded, that have been weakened by disease, that are advanced in years, that are young in years, that are weak, that are desirous of lengthening their lives, that are desirous of improving strength, complexion and voice, that desire nourishment, that desire brilliancy of complexion, vigour or energy or memory or strength of understanding or a powerful digestive fire or great intelligence or strength of senses, that are afflicted with burns or wounds inflicted with the aid of weapons or with poison.*

* वातपित्तप्रकृतयो वातपित्तविकारिणः यक्षुःकामाः क्षताः क्षीणाः हृष्टबालस्तथाशक्ताः आयुः-
प्रकर्षकामाश्च वृद्धवर्णास्वरार्थिनः पुष्टिःकामाः प्रजाकामाः सौकुमार्यार्थिनश्च दीर्घयोजः स्मृतिमेधापि-
बुद्धिन्द्रियबलार्थिनः पिबेद्यमसिर्पिरातृशदाहृशस्त्र विषाग्निभिः राजयक्ष्माणिबालैश्च हृष्टैश्च भक्षयेयते ।
रोगैरसामि विप्रभ्यां च विवर्त्ये च मदत्यये । ज्वरमन्दानले हि न सपिबुद्धमन्यते ॥

Drinking of ghee is contraindicated for those that are suffering from Rajayakshma (Phthisis), for children and old people in whose constitutions kapha is in an excited state and for those that are suffering from Amaroga, Visuchika, Vibandha, Madatyaya, Jwara, Agnimandya and Meha diseases.

*Ghrita Abhyangam**

Anointing the body with medicated ghees is beneficial in cases of derangement of Vata, Pitta, Kapha, Rakta and Sannipata, also for those that are emaciated, that are suffering from Mada, Murcha, Pralapa, Thirst, fever accompanied by burning, Santapta and in chronic indigestion. It is highly preferable for children and youths and for those that are suffering from indigestion.

Anointing the body with ghrita is contraindicated for those that are suffering from Gulma, enlargement of spleen, jaundice, diarrhoea, swasa, kasa, udara, chardhi, pandu, swellings all over the body, abscess, Parswasula, Gandamala (goiter) and Arbuda diseases. It is not advisable in Seetha jwara and Prameha.

Ghrita gandusham.

Gargling the mouth with ghee is recommended in a case of burning sensation of the mouth or in case of inflammation accompanied with burning or in case of accidental wounds or septicaemia or poisoning of the mouth or wounds caused by ksharas and burns.†

Ghrita as nasyam.

Sushruta says ghee should be used as Nasyam in a case of Pittaja disorder. We find its use as nasyam in cases of Swara-bhanga and Siroroga,

Ghee as medicine in particular.

If we see into our ancient medical books, we find the use of ghee as medicine in all the eight main subdivisions of Ayurveda.

Ghee as Rasayana.

We have already studied that ghee is a Rasayanam. Rasayana here means which improves general health and arrests the

* वातेपित्तकफैरक्तो सन्निपातेकृशांगिके मदमूर्च्छाप्रलापेषु तथा दाहज्वरेषु च । सक्तमे सक्ततेजीर्णे हृत्यान्ते विशेषतः बालमध्यमजीर्णानां घृताशनं प्रशस्यते । शुक्लप्लीहाग्निसदनकामलास्वातिसारिषु श्वासकासोदरच्छर्दिपाण्डुसर्वांगसोशेषु विद्रवौपाचनं शूलिषु गण्डमालातुं दादिषु शीतज्वरे प्रमेहे च घृताभ्यङ्गो न शस्यते ।

† ऊपादाहान्वितेपाके क्षतेवागंतुसंभवे ।

विषचारान्निदग्धे च सर्पिर्धार्यपयोधवा ॥

ravages of time. Rasayana can rejuvenate an old man, and supply those vital elements to an old and exhausted human body which ebbs away with the progress of years. It is prescribed for men in health which would arrest decay and guard against the approach of senility by increasing the fundamental vital principles of the body and preventing Vayu, Pitta and Kapha from being transformed into morbid diathesis.

It is no exaggeration to say that there is no rasayana preparation without the combination of ghee. In some, it is used in little quantities and in others in larger. Moreover, all the preparations of rasayana are advised to be kept in earthen vessels which have sucked a sufficient quantity of ghee for some time. To increase the properties of a rasayana, ghee is also recommended to be taken with food and to use it as Abhyangam.

Charakacharya says in the chapter on rasayana that if one takes ghee for three years he lives for a hundred years, freed from decrepitude or decay. He succeeds in retaining what he hears. No disease overtakes him. If poison comes in contact with his body, it fails to affect him. His body becomes as compact as stone. He also becomes irresistible to view and unassailable by all creatures.

Various kinds of medicated ghees are mentioned by various authors as rasayana preparations, important among them being Triphala ghrita of Charaka and Brahmi ghrita & Sata paka Vacha ghrita of Sushruta, Pancharaviada ghrita, Chatuskuvalaya ghrita and Satavari ghrita of Vagbhata.

Ghee as Vajikarana.

We have also studied that ghee is a good Vajikaranam. And we find in Charaka, Sarira, chapter VI, that when there is absence of Semen the use is approved of milk and ghee which are regarded as sweet and oily. Especially in chapters on Vajikarana, we find only a very few preparations without the combination of ghee. Charaka says, a young man who eats and drinks ghee and milk every day, who is fearless and free from ailments of every kind, who indulges in sexual pleasures every day and who cherishes voluptuous thoughts succeeds in approaching his wives like a bull. There are various medicated aphrodisiac ghees. For want of space I will mention only a few of them. They are: Aphrodisiac ghee No. 1, and Aphrodisiac ghee No. 2 of Charaka.

Not only internally but ghee when externally applied as well is a good Vajikaranam (aphrodisiac). Sushrutacharya says, "if ghee boiled with eggs or the testes of alligators, mice, frogs and sparrows and by lubricating the soles of the feet with this ghrita, a man should be able to visit a woman with undiminished vigour so long as he would not touch the ground with his feet.

Again he says in Saseerasthana, Chapter ii, "A husband wishing to beget a son by his wife on the fourth day of her uncleanness, *he should anoint or lubricate his body with ghrita* and should partake of a food in the afternoon or evening composed of boild sali rice, milk and *ghrita*, and then visit the bed of his wife.

Use of ghee in jwara (fever).

Ghee quenches all undue heat of fever. Being cooling in its potency it subdues Pitta, by its oiliness it subdues Vayu and when mixed with kaphahara drugs it checks kapha.

The fever that is not alleviated of a person who has been dried by the administration of decoctions and emetics, as also by fasts and light food has ghee for its remedy.

The heat that causes dryness of a fever-stricken patient who has been dried by heat, that constituent dhatu which strengthens the wind is Vayu. This Vayu is alleviated by oily substance called ghee.

After the tenth day when the kapha has become mild, when Vayu and Pitta have gained force and * when the faults have become matured the drinking of ghee operates like Amrita.

Whenever the dhatus in the organism of a fever patient become weak, generally that fever becomes chronic, in such fever (Purana jwara), to subdue the fever and to increase the strength of the body one should give ghee to such a patient.

In fever that is accompanied by erysepelus, also in that caused by wounds, also in that by malignant boils the drinking of ghee at the outset is beneficial, if neither kapha nor pitta is predominant.

* विपरीतं ज्वरोष्णं जयेत्पित्तं च शैत्यतः स्नेहादातं घृतं तुल्यं योगसंस्कारतः कफम् ज्वराः कषायैर्वसनैर्लघुनैर्लघुभोजनैः कृच्छ्रस्थेन शस्यंति सर्पिस्तेषां भिषग्जितम् । कृच्छ्रं तेजोज्वरकरं तेजसाराक्षतस्य च स्यादनुबलीघातुः देहसाध्यः स चानिक्तः । कषायपानपथ्यान्निर्देशाद् इति लिखिते सर्पिर्दद्यात्कफं मंदे वातपित्तोत्तरे ज्वरे ॥ पक्वे पुटोपि शस्यते ॥ देहधातुबलवत्त्वज्वरो जीर्णो नुवर्तते कृच्छ्रं हिते ज्वरे ज्वरं कृत्तेजसा कृच्छ्रितस्य च ॥

That fever which is caused by wounds becomes alleviated by drinking ghee and rubbing it over the body.

We find the use of ghee in Sushruta thus :—The residue of the deranged dosha having lurked in the system (of a patient) even after the exhibition of proper emetics and purgatives, the fever should be remedied by draughts of medicated ghee, if the system of the patient is sufficiently dry.

Ghee, oil and warm water according to the exigency of the case would *remove bad taste in the mouth* in fever. An *empty feeling of the head in fever* would be relieved by using an errhine (nasyam) of medicated ghee prepared with the drugs of the jeevaneeya group.

Draughts of ghee should be given in all forms of fever at the close of twelve days, for by that time the aggravated doshas return to their respective Asayas.

Draughts of ghee (matured but non-medicated) should be given as soon as the premonitory symptoms would make their appearance and the patient would get relief thereby. This is applicable only in a case of Vataja type of fever.

Use of ghee as Abhyangam in fever :—Lubrication of the body with oil at the close of the acute stage *i.e.* on the thirteenth or fourteenth day of the attack would be attended with beneficial results in a case of Vata-Sleshma fever where fomentations have utterly failed to relieve the distressing symptoms of the deranged Vayu. Ghrita duly cooked with sweet and bitter drugs should be used in Pittaja fever ; while in Kaphaja fever, the ghrita should be cooked with bitter and pungent drugs. In the cases of fever due to the concerted action of two or three doshas, the ghee should be cooked with the drugs of two or more of the above groups according to the nature of the Doshas involved in each case.

Ghee mixed with the decoction of Triphala should be given to a patient suffering from an attack of Tridoshaja fever. Various kinds of medicated ghees are mentioned and may be advantageously used in cases of vishama jwara. They are Shatphala ghrita, Kalyana ghrita, Panchagavya ghrita, Tiktaka ghrita, Vrisha ghrita, Triphaladi ghrita, Guduchyadi ghrita, Kalasyadi ghrita, Patoladi ghrita and Mahakalyanaka ghrita.

Pippalyadi and Vasa ghrityams of Charaka may be used in all kinds of chronic types of fever.

(To be continued).

MIDWIFERY IN ANCIENT INDIA

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.,

Calcutta.

X.

APPENDIX

ORIGINAL SANSKRIT TEXTS.

देहसृष्ट्यागर्भोत्पत्तिप्रकारः ।

शुरूं प्रणम्य यत्नेन ज्ञानध्वान्तबुधाकरम् ।

वक्ति मर्त्यदेहसृष्टिं द्विजः श्रीरामतोषणः ॥

शक्तानन्दतश्चिणी प्रथमपरिच्छेददृष्टज्ञानभाषणम्

देव्युवाच—

शरीरं कीदृशं नाथ मुक्तिर्व्या केन कर्मणा ।

इदानीं श्रोतुमिच्छामि ब्रूहि मे शशिशेखर ॥

ईश्वर उवाच—

शृणु देवि प्रवक्ष्यामि शरीरं कर्मसम्भवम् ।

रजस्वला च या नारी विशुद्धा पञ्चमे दिने ।

पीडिता कामबाणेन ततः पुरुषीकृते ।

भगलिङ्गसमायोगान्मैथुनं स्यत्तदा तयोः ।

अन्योन्यस्पर्शनादेव जायते च महासुखं ।

क्षरते च यदा रेतः प्राणापानविसंश्रितं ।

क्षितिरापस्तथा तेजो वायुराकाशमेव च ।

सर्वेषां तत्र तत्त्वं स्याद्देहस्वरक्तबीजयोः ॥

गर्भोत्पत्तिकथनम् ।

मातृकामेदतन्त्रे द्वितीय पटले

देव्युवाच—

ब्रह्म ईशान सर्वज्ञ सर्वतत्त्वविदांवर ।

यत् त्वया कथितं देव मम सङ्गे विहारतः ।

कथं वा जायते पुत्रः कथं वा शुक्रसंस्थितिः ।

पुत्र इति गर्भमात्रोपलक्षणम् ।

केन प्रकारेण गर्भी जायत इति प्रश्नस्य तात्पर्यम् ।
वर्द्धमानस्य लिङ्गस्य प्रवेशो वा कथं भवेत् ।
भौतियुक्ता ह्यहं नाथ त्वाहि मां दुःखसङ्कटात् ॥

महादेव उवाच—

मणिपूरं महापद्मं सुषुम्ना मध्यसंस्थितम् ।
तस्मान्नालेन देवेशि नाभिपद्मं मनोहरम् ।
नालत्रयं समायुक्तं सदा शुक्रविभूषितम् ।
ऊर्ध्वं नालं सहस्रारं अतः शुक्रविभूषितम् ।
तस्मादेव स्तनद्वन्द्वं वर्द्धमानं दिने दिने ।
मध्यनालं सुषुम्नातं वृन्ताकारं मुशौतलम् ।
आयोन्याग्रमधोनालं सदानन्दमयं शिवे ।
शृणू चार्ध्वङ्गि सुभगे तन्मध्ये लिङ्गताडनात् ।
यद्रूपं परमानन्दं तन्नास्ति भुवनत्रये ।
नाभिपद्मन्तु यद्रूपं तत् शृणुष्व समाहिता ।
वस्थानं मध्यदेशेऽस्य सदा पद्मविराजितम् ।
बाह्यदेशे चाष्टपत्रं चतुरस्रञ्च तद्वहिः ।
चतुर्द्वारसमायुक्तं सुवर्णाभं सवृन्तकम् ।
तत्पद्मेन भवेत् पुष्पं वृन्तयुक्तं त्रिपत्रकम् ।
प्रफुल्ले तु त्रिपत्रे वै बाह्ये शोणितदर्शनम् ।
एतन्मध्ये महेशानि यदि स्युः ताडनम् ।
पद्ममध्ये गते शुक्रे सन्ततिस्ते न जायते ॥

पद्ममध्ये शुक्रगमनप्रकारान्तं प्रपञ्चसारे—

स्वस्थानतश्च्युतात् शुक्राहिन्दुमादाय मारुतः ।
गर्भाशयं प्रविशति यदा तुल्यं तदापरः ।
आर्त्तवात् परमं बीजमादायास्याश्च मूलतः ।
यदा गर्भाशयं नेष्यत्यथ संमिश्रयेन्मरुत् ।
संक्षोभ्य संवर्द्धयति तन्मूलं शोणितधिकम् ।
स्त्री स्यात् शुक्राधिकं ना स्यात् समेन च नपुंसकम् ।
वायुवह्नुभसां योगे गर्भवृद्धिः प्रजायते ॥
एतेन त्रिवृत्करणपक्षे व्यष्टीकृतः ॥

ज्ञानभाष्ये—

नाभिपद्मे महादेवि भ्रास्यते च समीरणैः ।
कुम्भकारो यथा चक्रे घटते च घटादिकम् ॥
तथा समीरणो गर्भे घटते प्राणिनां तनुम् ॥

सारदातिलके—

रक्ताधिका भवेन्नारी भवेद्देतोधिकः पुमान् ।
उभयोः समतायान्तं न पुंसकस्मिति स्थितिः ॥

मातृकाभेदतन्त्रे—

पुरुषस्य तु यत् शुक्रं शक्तेस्तस्याधिकं यदि ।
तदा कन्यां विजानीयाद्विपरोते पुमान् भवेत् ।
उभयोस्तुल्यशुक्रेण स्त्रीव भवति निश्चितम् ॥

तत्राधिक्यतुल्यादिकं राघवभट्टदृष्टवचनोक्तप्रमाणस्यैव यथा—

ह्वाविंशती रजोभागाः शुक्रमात्राश्चतुर्दश ।
गर्भसंजनने काले पुंस्त्रियोः सम्भवन्ति हि ॥
मात्रा भाग इत्यर्थः ।
नारी रजोऽधिकांशे स्यान्नरः शुक्राधिकांशके ।
उभयोरुक्तसंख्यायां स्यान्नपुंसकसम्भवः ॥

राघवभट्टदृष्टवचनभटे वह्नवपत्यकारणमुक्तं यथा—

वायुना बहुधा भिन्ने तद्विन्दो वह्नवपत्यता ।
वियोनिविकृताकारा जायन्ते विकृते तथा ।
मृणु चार्बुजं सुभगे पुष्पमाहात्म्यमुत्तमम् ।
मेध्यं तत् शुक्रसंयोगे वृद्धते च दिने दिने ।
एवं दिङ्माससंप्राप्तो तत्पुण्ये हृन्दमयुते ।
गलिते परमेशानि व्यक्ता भवति सन्ततिः ॥

श्रीदेव्युवाच—

किञ्चिद्द्रागादिसंभृते कृमिकीटादिसम्भवे ।
तस्माज्जीवाः प्रणश्यन्ति सा नारी जीवन्तं कथम् ॥

श्रीशङ्कर उवाच—

तस्य पुष्पस्य माहात्म्यं किं वक्तुं शक्यते मया ।
विन्दुस्थानसहस्रान्तु पुष्पमध्ये प्रियं वदे ।

बुद्बुदा येऽत्र तिष्ठन्ति तत्रैव सन्ततिर्भवेत् ।

एवं क्रमेण देवेशि सहस्रं सन्ततिर्यदि ।

वर्द्धमानं तदा पुष्पं पौडा किञ्चिन्न जायते ॥

वीर्यवदुर्गभकारणमाह राघवभट्टधृतम्—

पूर्णपौडशवर्षा स्त्रा पूर्णविंशेन सङ्गता ।

शुद्ध गर्भाशये मार्गं रक्ते शुक्लेऽनिले हृदि ।

वीर्यवन्तं सुतं सूते ततोऽन्यूनाद्वयोः पुनः ।

रोगाल्पायुरधन्यो वा गर्भो भवति नैव वा ।

शुक्रशोणिताद्युत्पत्तिकथनप्रकारः ।

योगार्णवे—

आयुषां भुक्तमाहारं स वायुः कुरुते द्विधा ।

संप्रविश्याथ मध्यन्तु पृथगन्नं पृथगजलम् ।

स वायुः प्राणवायुः ॥

योगियाज्ञवल्क्ये उत्तरखण्डे चतुर्थाध्यायेऽपि—

आयुषां भुक्तमाहारं सहसा तैः समीकृतम् ।

तुन्दमध्यगतः प्राणस्तानि कुर्यात् पृथक् पृथक् ।

पृथक् कारणप्रकारसु योगियाज्ञवल्क्ये—

पुनरग्नौ जलं प्राप्य अन्नादीनि जलोपरि ।

स्वयं ह्यपानः संप्राप्य तेनैव सह सारुतः ।

प्रयाति ज्वलनं तत्र देहमध्यगतं पुनः ।

अग्नौ जलं प्राप्य अन्नादीनि जलोपरि संप्राप्य तेनैव प्राणवायु-
नैवापानो वायुर्देहमध्यगतं ज्वलनं प्रयाति प्राप्नोतीत्यन्वयः एवञ्च प्राणेन
प्रेरितमिति प्राणः स्थित्वति च प्राधान्येन बलते वस्तुसु प्राणोपानाभ्यामेव
प्रेरितमित्यर्थः ।

वायुमा वर्द्धते वज्जिरपानेन शनैः शनैः ॥

ततो ज्वलति बिप्रेन्द्रि स्वकुले देहमध्यके ।

ज्वालाभिर्ज्वलनं तत्र प्राणेन प्रेरितं ततः ॥

ज्वलत्युदकमाश्रित्य कोष्ठमध्यगतं तदा ।

अन्नं व्यञ्जनसंयुक्तं जलोपरि समर्पितम् ॥

ततः सुषुप्तमकरोद्वह्निस्तप्तवारिणा ॥

योगार्णवे च—

अग्नेरुर्द्ध्वं जलं स्थाप्य तदन्नञ्च जलोपरि ।
जलस्याधः स्वयं प्राणः स्थित्वा स्वे दयते शनेः ।
वायुना व्युह्यमानोऽग्निरत्युष्णं कुरुते जलम् ।
अन्नं तदुष्णतोयेन समन्तात् पच्यते पुनः ।
द्विधा भवति तत्पक्वं पृथक् कीदृशं पृथग्वसम् ॥
कीदृशं मलम् ॥

तत्र रसोत्पत्तिप्रकारस्तु प्रपञ्चसारे द्वितीये पटले—

अथाहृतं षड्रसं वाऽप्याहारं कण्ठमार्गम् ।
श्लेष्माणानुगतं तस्य प्रभावान्मधुरीभवेत् ।
तत्र स्वाद्वन्मन्वणतिक्तोषणकषायकाः ।
षड्रसाः कथिता भूतविकृत्या द्रव्यमाश्रिताः ।
स्वादु मिष्टम् । उषणं कटु ।
तथैवमाश्रयगतं पश्चात् पित्ताशयं व्रजेत् ॥

आशयं क्षिद्रम् ॥

तदातस्यानुगमन्यात् कटुकत्वं प्रपद्यते ।
तथात्मान्तरसं श्लिष्टं पच्यते पित्तवारिणा ॥

जलादीनां पाकेनावस्थान्तरमुक्तं योगियाज्ञवल्कले —

स्नेह-मूत्रे जलं स्यातां बोध्यैरूपं रसो भवेत् ।
पुरीषमन्नं स्य हार्गि प्राणः कुर्यात् पृथक् पृथक् ॥

प्रपञ्चसारे—

ग्रहणी नाम सा पात्री प्रसृताञ्जलिसन्निभा ।

पात्री नाडी ।

अधस्तात्स्याः प्रधानाग्निः समानेनापि नुद्यते ।
तस्याधस्तात्त्रिकोणाभं ज्योतिराकारमुत्तमम् ।
विद्यते स्थानमेतच्च मूलाधारं विदुर्वुधाः ।

प्रधानाग्निर्दीपदूषास्याग्निभ्यो भिन्नो वडवानलरूपो जठराग्निरिति
प्रसिद्धः ।

तथाच—

पचमानाद्रसं भिन्नं वायुरक्तादिकं नयेत् ।
 तत्र कौटुं पृथग्भिन्नं ग्रहण्यां चिनुतेऽनिलः ।
 तच्चीयमानं विन्नाम ग्रहणीं पूरयेन्मुहुः ।
 सा तथा शक्ता पूर्णा वलिता प्रतिमुञ्चति ।
 शक्ता मलेन ।
 पुरीषं पायुमार्गेण तत्पाके चाम्भसस्ततः ।
 अङ्गस्वेदश्चदभ्यन्तर्व्याप्तिः सूक्ष्मैः शिरामुखैः ।
 वस्तिमापूरयेद्वायुः पूर्णो मुञ्चति धारया ।
 मूत्राशयो धनुर्व्वेक्रो वस्तिरित्यभिधीयते ।
 मूत्र मित्याहुर्दकं वस्तेऽनिलनिर्गतम् ।
 अपथ्यभाजामनयो मार्गयोर्दोषदुष्टयोः ।
 प्रमेह-मूत्र-कृच्छ्रादेर्ग्रहण्यादेश्च सम्भवः ॥

राधवभट्टदृष्टतमुच्यते—

त्वगसृङ्गांसमेदोऽस्थिमज्जाशुक्राणि धातवः ।
 भवन्त्यन्योऽन्यतः सर्व्वे पाचिताः पित्ततेजसा । इति ।
 एतेन पूर्व्वं पूर्व्वस्योत्तरोत्तरं प्रति कारणत्वमुक्तम् ॥

तथाच तत्रैव—

रसः स नाडीमधस्थः शरीरेणोष्णो भृशम् ।
 पचते पचमानाच्च भवेत् पाकद्वयं पुनः ।
 चर्मावेष्ट्य समन्ताच्च रुधिरन्तु प्रजायते ।
 स्व स्व कोषाग्निना पक्वैर्जायन्ते धातवः क्रमात् ॥

योगार्णवे—

रसेन तेन ता नाडीः प्राणः पूरयते शनैः ।
 प्रतर्पयन्ति संपूर्णास्ताश्च देहं समन्ततः ॥

योगियाज्ञवल्क्ये—

समानवायुना सार्द्धं रसं सर्वासु नाडीषु ।
 व्यापयन् श्वासरूपेण देहे चरति मारुतः ।
 व्योमरन्ध्रैश्च नवभिर्विन्मूत्राणां विसर्जनम् ।
 कुर्व्वन्ति वायवः सर्व्वे शरीरेषु निरन्तरम् ।

निश्वासीत्स्वासासाश्च प्राणकर्म समीरिताः ।

अपानवायोः कर्मैतद्विन्मूत्रादिविमर्जनम् ।

प्राणापाने च चेष्टादि व्यानकर्मैति चेष्टते ।

उदानकर्म तच्चोक्तं देहस्योन्नयनं दि यत् ।

पोषणादि समानस्य शरीरे कर्म कीर्तितम् ।

उद्गरादि गुणो यस्तु नागकर्म समारितम् ।

निमीलनादि कर्मस्य क्षुत्तृणा कृकरस्य च ।

देवदत्तस्य विप्रेन्द्र जृम्भाकर्मैति कीर्तितम् ।

धनञ्जयस्य पोषादि सर्वं कर्म प्रकीर्तितम् ।

वायुनां स्थानादौन्यग्रे वक्ष्यन्ते ॥

इति शुक्रशीणिताद्युत्पत्तिकथनम् ॥

देहसृष्टौ धातुकथनम् ।—

योगार्णवे —

मातुरस्वबहा नाडी मनुविद्या पराभिधा ।

नाभिस्थनाडी गर्भस्य माता कृतवसावहा ।

शाक्तानन्दतरङ्गिण्याम्—

कलनञ्चैकरात्रेण बुद्बुदं पञ्चमे दिने ।

शीणितं दशरात्रेण मांसपिण्डं चतुर्दशे ॥

प्रपञ्चसारे—

मासीयं नाम याषोत्यं पौरुषं कर्म्मणं मलम् ।

आणवं नाम संप्रोक्तं मिलितं तन्मलह्वयम् ।

सूक्ष्मरूपानि तत्त्वानि चतुर्विंश मलह्वग ।

तत्र योगं प्रकृत्याशु ततस्तु गर्भमारुतः ॥

संचोभ्य संवर्द्धयतीत्यादि पूर्वोक्तेनान्वयः ।

स्वगतैश्चरुदग्नाग्निः क्षिद्यते काय्यते च तत् ।

मिश्रीभूतं तदङ्गैर्ब मातुरङ्गुष्ठमस्मितम् ॥

सन्धितमिति मातुरङ्गुष्ठनखरपरिमितमित्यर्थः ॥

राघवभट्टधृतयोगार्णवे—

घनमांसञ्च विंशाहेपिण्डभावापलक्षितम् ।

पञ्चविंशतिपूर्णाहेपलं तदङ्गुरायते ॥

शाक्तानन्दे तु—

मासैकेन तु पूर्णेन मांसपिण्डोऽङ्कुरायते ।
इत्युक्तम् ॥

तत्रैव

आदौ सञ्जायते बीजं ब्रह्माण्डं सहस्राङ्कुरः ।
तस्य मध्ये सुमेरुश्च कङ्कालदण्डरूपपृक् ।
चराचराणां सर्वेषां देवादीनां विशेषतः ।
आलय सर्वभूतानां मेरोरभ्यन्तरेऽपि च ।
प्रदोषकलिकाकारो जीवो हृदि सदास्थितः ।
रज्जुवद्धो यथा श्येनो गतोऽप्याकष्यते पुनः ।
गुणवद्वस्तथा जीवः प्राणापानेन कष्यते ॥

योगियज्ञवल्करे द्वितये याध्यायेतु—

तन्मधेयं नाभिरित्युक्तं नाभौ चक्रसमुद्भवः ।
द्वादशाङ्गुलं तच्च तेन देहः प्रतिष्ठितः ।
चक्रेऽस्मिन् भ्रमते जीवः पुण्यपापप्रणोदितः ।
तन्तुपञ्जरमधस्थो यथा भ्रमति लुप्तिकः ।
लुप्तिकं ऊर्णनाभः माकङ्कसा यस्य प्रसिद्धिः ।
नाभौ जीवस्य भ्रमणमात्रं स्थिति स्थानन्तु हृदयमेव ।
तेन पूर्ववचने न विवादः ॥

योगार्णवे—

मासद्वये तु सम्पूर्णं शिरो मेदः प्रजायते ।
मज्जास्थि च त्रिभिर्मासैः केशस्त्वक् च चतुर्थके ।

एषु मासेष्वधरात्मविवेके तु विशेष उक्तो यथा—

द्रवत्वं प्रथमे मासे कललाख्यं प्रजायते ।
द्वितीये तु घन पिण्डः पेशीष्टघनमवूर्तम् ।
पुंस्त्रीनपुंसकान् तु प्रागवस्थाः क्रमादिमाः ।
तृतीये त्वङ्कुराः पञ्च कराङ्गु शिरसो मताः ॥

अत्र ग्रन्थत्रये यद्देहं त्रयमङ्कुरोत्पत्तेरुक्तं तच्छरीरमेवैवयवाशङ्कुर-
मेदेनाविरुद्धमाज्ञायमेदेन वा ।

अङ्गप्रत्यङ्गभागाः स्युः सूक्ष्माश्च युगपत्तदा ।
 चतुर्थे व्यक्तता तेषां भागानामभिजायते ।
 मातृजच्चास्य हृदयं विषयानभिकाङ्क्षति ।
 अतो मातुर्नोऽभीष्टं कुर्याद्गर्भसमृद्धये ।
 ताञ्च द्विहृदयां नारीमाहुर्दोहदिनीं बुधाः ।
 अदानाद्दोहदानान्तु गर्भस्य व्यङ्गतादयः ।
 मातुश्चेद्विषयालाभस्तदात्तौ जायते सुतः ।
 गर्भः स्यादर्धवान् भोगौ देहे दोहद दर्शने ।
 अलङ्कारे सुललितो धर्मिष्ठस्तापसाश्रमे ।
 देवतादर्शने भक्तौ हिंस्त्रो भुजगदर्शने ।
 गोधाशने तु निद्रालुर्व्वलो गोमांसभक्षणे ।
 माहिषेण तु रक्ताक्षं लोमशं स्रूयते सूतम् ।
 प्रवृद्धं पञ्चमे पिण्डं मांसशोणितपुष्टिभाक् ।
 षष्ठेऽस्थिस्रायुनाड्यादिनखकेशविविक्तता ।
 वल्लवह्नौ चोपचितौ सप्तमे त्वगपूर्णता ।
 अष्टमे त्वक्युति स्याताम् अजस्रैतच्च हृद्भवम् ॥

ज्ञानभोषितु—

कर्णाक्षिनासिकारम्भं कण्ठोदरञ्च पञ्चमे ।
 षष्ठे मुखं तथा पादौ सर्वाङ्गानि तु सप्तमे ।
 सन्धिः सम्पूर्णतां याति अष्टमे मासि वै ततः ।
 एतदपि पूर्व्ववत् ।
 अण्डाधारञ्च कङ्कालं प्रारभ्य गुदमूलतः ।
 ह्यतिशद् ज्ञान विज्ञान ग्रन्थिनो वर्द्धते सदा ।

सारदायां प्रथमपटले—

अथ माताहृत्तरत्नपानाद्यैः प्रोषितः कृभात् ।
 दिनात् पक्षोत्तया मासाद् वर्द्धते तत्त्व देहवान् ।
 तत्त्वदेहवानिति चतुर्विंशतितत्त्वात्मकशरीर इत्यर्थः ॥
 दोषैर्दूषितः सुखं प्राप्तो व्यक्तिं याति निजेन्द्रियैः ।
 वातपित्तकफा दोषा दुषयः स्युः सप्तधातवः ॥
 इति देहसृष्टौ धातु कथनम् ॥

इन्द्रियेन्द्रियार्थकथनम्—

सारदायाम्—

ज्ञानन्द्रियाणि श्रोत्रं त्वक् दृग्जिह्वा नासिकादयः ।
ज्ञानेन्द्रियार्थाः शब्दाद्याः स्मृताः कर्मेन्द्रियान्यपि ।
शब्दाद्या इति शब्दस्पर्शरूपरसगन्धाः ।
वाक्पाणिपादयुग्मं संज्ञान्याहुर्मनीषिणः ।
मुख-हस्त पाद-गुद-लिङ्गानि ।
वचनादानगतयो विसर्गानन्दसंयुताः ।
कथनग्रहण-गमन-त्यागनन्दाः ।
कर्मेन्द्रियार्थाः संप्रोक्ता अन्तःकरणमन्त्रनः ॥

विश्वसारे प्रथमपटले—

इन्द्रियाणां गुणान् वक्ष्ये शृणुष्व कमलानने ।
चक्षुषो रूपमाख्यातं कर्णयोः शब्दमेव च ।
गन्धसुनसिविज्ञेयस्त्वचि स्पर्श उदाहृतः ।
आदानं भूजयुग्मेषु जिह्वायां रस उच्यते ।
गुह्ये विसर्गो विज्ञेय आनन्दः स्यादुपस्थके ।
गमनं पादयुग्मे च कथनं मुखपङ्कजे ॥
इतीन्द्रियेन्द्रियार्थकथनम् ।

इन्द्रियाणां गुणकथनम्—

अन्तःकरणं स्पष्टयति सारदाकृतम्—

मनावुद्धिरहङ्कारश्चित्तन्तः परिकीर्तितम् ॥

अत्र सङ्कल्पविकल्पात्मकं मनः । सर्वभावनिश्चयकारिणी बुद्धिः ।
ज्ञातभिमानयुक्तोऽहङ्कारः । निर्बिकल्पकचित्तम् ।

यदाह—

एषा शक्तिः परा वीजरूपिणी प्रोक्तलक्षणा ।
सङ्कल्पश्च विकल्पश्च कुर्वीणा तु मनो भवेत् ।
बुद्धिरूपा तथा सर्वभावनिश्चयकारिणी ।
ज्ञातास्मात्प्रभिमानाद्या मैवाहङ्कारमञ्जिता ।
निर्बिकल्पात्मिका तैव खलु चित्तस्वरूपिणी ।
एवमेकैव बहुधा नर्तकोऽव प्रतीयते ॥

श्रुतिरपि—

मनः सङ्कल्पयति बुद्धिर्निश्चिनोति अहमभिमानयति चेतश्चेतयति ।

प्रपञ्चसारोऽपि—

परिण धाम्ना समनु प्रवृद्धामनस्तदा सा तु महाप्रभावा ।

यदा तु सङ्कल्प विकल्प कृत्या यदा पुनर्निश्चिणुते तदा सा ।

स्याद्बुद्धिसंज्ञा च यदा प्रवृत्तिज्ञातारमात्मान महस्त्वितिः स्यात् ।

तदा यदा सा त्वतिनीयतेऽन्तश्चित्तञ्च निर्द्धारितमर्थमेषाम् ॥

सारदायाम्—

दशेन्द्रियाणि भूतानि मनसा सह षोडश ।

विकारः स्युः प्रकृतयः पञ्चभूतान्यहङ्कृतिः ।

अव्यक्तं महादित्यष्टौ तन्मात्राश्च महानपि ।

साहङ्कारा विकृतयः सप्ततत्त्वविदोविदुः ।

विकाराः षोडश, अष्टौ प्रकृतयः, सप्तविकृतय इति वचनस्य पर्यवसितार्थः । यदुक्तं मूलप्रकृतिरविकृतिर्महदाद्याः प्रकृति विकृतयः सप्त ।

षोडशकसु विकारो न प्रकृतिर्नविकृतिः पुरुषः इति तत्त्वविद इति । एतानि प्रकृत्यन्तानि चतुर्विंशतितत्त्वानि पुरुषान्तानि पञ्चविंशतिः ॥

तदुक्तं वायवीय संहितायाम्—

त्रयोविंशति तत्त्वेभ्यः पराप्रकृतिरुच्यते ।

प्रकृतेस्तु परं प्राहुः पुरुषं पञ्चविंशकम् ।

यदा तत्त्वविद एव विदुः ।

एषां तत्त्वान्तर्भावात् तत्त्वविद्भिरेव संज्ञाकृता इत्यर्थः ।

सारदायाम्—

अग्निषोमात्मको देहोविन्दुर्यदुभयात्मकः ॥

शुक्लमग्निरूपं रक्तं सामरूपम्, स तदात्मकत्वाद्देहोविन्दुर्यदुभयात्मक इत्यर्थः ।

तदुक्तं राघवभट्टधृतन —

कलाषोडशकश्चन्द्रः स्याद्दशकस्तोरविः ।

कलादशयुगो वल्लिः कलाष्टत्रिंशदंशभुक् ।

स अत्र सम्भवन्तोह गर्भाधानस्य हेतवे ।

अग्नीषोमात्मकं तेन गीयते सचराचरम् ।

कलांशकेन योगेन भूयाद् गीतं सन्भवः ॥

पञ्चभूतोज्ज्वाल्यादिकथनम्—

ब्रह्मज्ञानतन्त्रे प्रथमपटले—

शिव उवाच

अस्थिमांसनखाद्यैः नाडी त्वक्चेति पञ्चमः ।

पृथ्वीपञ्चगुणाः प्रोक्ता ब्रह्मज्ञानेन भाषितम् ।

मलं मूत्रं तथा शुक्रं स्त्रीषा शोणितमेव च ।

तोयपञ्चगुणाः प्रोक्ता ब्रह्मज्ञानेन भाषितम् ।

हास निद्रा क्षुधा चैव भ्रान्तिरालस्यमेव च ।

तेजः पञ्चगुणाः प्रोक्ता ब्रह्मज्ञानेन भाषितम् ॥

धारणं चालनं क्षेपः सङ्कीर्णः प्रसवस्तथा ।

वायुपञ्चगुणाः प्रोक्ता ब्रह्मज्ञानेन भाषितम् ।

कामः क्रोधस्तथा लोभस्तथा मोहश्च पञ्चमः ।

नभः पञ्चगुणाः प्रोक्ता ब्रह्मज्ञानेन भाषितम् ॥

राघवभट्टकृतम्—

अस्थि मांसं त्वचं स्नायु रोम एव तु पञ्चमम् ।

इति पञ्चविधा प्रोक्ता पृथिवी कठिनात्मिका ।

लाला मूत्रं तथा शुक्रं शोणितं मज्जपञ्चमम् ।

अपां पञ्चगुणा एते रुद्ररूपाः प्रकीर्तिताः ।

क्षुधा तृष्णा भयं निद्रा भ्रालस्यं भ्रान्तिरेव च ।

तृष्णात्मका गुणा एते तेजसः परिकीर्तिताः ।

धारणं वलनं भुक्तिराकुञ्चनप्रसारणम् ।

एते पञ्चगुणा वायव्यः क्रियारूपा व्यवस्थिताः ।

रागद्वेषौ तथा लज्जा भयं मोहस्तथैव च ।

व्याम्रः पञ्चगुणाः प्रोक्ताः शून्याख्ये शुषिरात्मनि ।

इति पञ्चभूतोज्ज्वाल्यादिकथनम् ॥

अन्तुनक्षत्रम् ।—

शाक्ता नन्दतरङ्गिण्याम्—

प्राणापानसमानश्च दानव्यानी च वायवः ।

नागः कूर्मोऽथ कृकरो देवदत्तो धनञ्जयः ।

एते दशगुणाः प्रोक्ताः सर्वप्राणवशात्मनः ॥

सारदातिलके—

दक्षिणांशः कृतः सूर्यो वामभागे निशाकरः ।

नाडाईश विदुस्तास मूर्ध्नास्तिस्त्रः प्रकीर्त्तिताः ।

इडावामे तनोर्मध्ये सुषुम्ना पिङ्गला परे ।

मध्या तासुपि नाडी स्यादग्नीषोमस्वरूपिणी ।

अत्रेडा वासुक्ताधःस्था धनुर्वेक्ता वामनासा पर्यन्तं गता एव पिङ्गला
दक्षिणान्ताधःस्था धनुर्वेक्ता दक्षिणनासान्तं गता, पृष्ठवंशन्तर्गता सुषुम्ना
इत्यर्थः, एतदग्रे स्फुटोभविष्यति ।

तथाप्रपञ्चसारे—

उर्ध्वन्तु मरुता नुन्ना तास्मादपि मलद्वयो ।

उभयात्मिकधोवृत्ता नाडी दीर्घा भवेद्वज्रः ।

अवाङ्मुखी सा तस्याश्च भवेत् पक्षद्वये द्वयम् ।

पक्षद्वये पार्श्वद्वये ।

नाड्यास्ताः सन्निरुद्धाः स्युः सप्तान्या नाडीकामताः ॥

तत्र या प्रथमा नाडी सा सुषुम्नेति कथ्यते ।

या वामेडेति सा ज्ञेया दक्षिणा पिङ्गला मता ॥

तथा—

काचिन्नाडी वह्निर्वेक्ता या मातुर्हृदि बध्यते ।

यया स पुष्टिमायाति केदार इव कुल्यया ।

मातुराहारसजैर्धातुभिः पुष्यते क्रमात् ।

क्रमवृद्धौ परं ज्यातिः कला चेतश्चतामियात् ।

सचेतश्च मलं तत्तु सभुतं सगुणं पुनः ।

सदोषं दूषसम्पन्नं जन्तुरित्यभिधीयते ।

सभूतपञ्चकं सचेतश्चमात्रसहितं तत् पूर्वोक्त मानवादिमलं
जन्तुरित्युच्यते इत्यन्वयः । किम्भूतम्, सगुणं सत्त्वादिगुणयुक्तं सदोषं
वायुपित्तकफयुक्तं दूषसम्पन्नं सप्तधातुविवम् । इति जन्तुलक्षणम् ॥

नाड्युत्पत्तिकथनं, प्रधाननाडी-शाखानाडीनिरूपणञ्च—

फलकोषद्वयं तत्तु व्यक्तं पुंसो न तु स्त्रियाः ।

नपुंसकस्य किञ्चित्तुव्यक्तिर तोपलक्षते ।
फलकोषद्वयम् अण्डकोषद्वयम् ।

निरुत्तरतन्त्रे प्रथमपठले—

नाडोनां संबहो देवि कञ्जयोनिः खगाण्डवत् ।

तत्र नाड्यः समुत्पन्नाः सहस्राणां द्विसप्ततिः ॥

कञ्जस्य पद्मस्य योनिरुत्पत्तिस्थानं शालुकमिति यावत् ।

प्रधानाः प्राणवाहिन्यो भूयस्तत्र दश स्मृताः ।

इडा च पिङ्गला चैव सुषुम्ना च तृतीयिका ।

गान्धारी हस्थिजिह्वा च पुषा चैव यशस्विनी ।

अलुम्बुषा कुहूश्चैव शङ्खिनो च दश स्मृताः ।

एवं नाडोमयं चक्रं विज्ञेयं शक्तिचक्रके ।

इडाया पिङ्गनायाश्च मध्ये या सा सुषुम्निका ।

इयञ्च त्रिगुणा ज्ञेया ब्रह्मविष्णुशिवात्मिका ।

रजगुणा च वज्राख्या चित्रिणी सत्त्वसंयुता ।

तमोगुणा ब्रह्मनाडी कार्यभेदक्रमेण च ।

तथा वायुर्भानुमयो ज्ञेयो मनश्चन्द्रात्मकं तथा ।

प्राणऽपानः समानश्चोदानव्यानी च वायवः ।

या वाममुष्कसंवद्धा संक्षिपन्ती सुषुम्नया ।

दक्षिणाञ्च समाश्रित्य धनुर्वक्रा हृदिस्थिता ।

बामांशयन्तान्तरगा दक्षिणां नासिकामियात् ।

तथा दक्षिण मुस्कस्था नासाया वामरन्ध्रगा ॥

तन्त्रान्तरे—

सुषुम्ना कलिता याता मुष्कं दक्षिणमाश्रिता ।

सङ्गता वामभागस्य यन्त्रमध्यं समाश्रिता ।

दक्षिणं नासिकाद्वारं प्राप्तेति गिरिजात्मजे ।

वाममण्डमनुस्यूता तथान्या सव्यनासिकाम् इति ।

अनयोः स्वरूपमुक्तं योगार्णवे—

इडा च शङ्खवन्द्वाभा तस्या बामे व्यवस्थिता ।

पिङ्गला सितरक्ताभा दक्षिणं पार्श्वमाश्रिता ।

तन्वान्तरे—

इडायां संश्रितश्चन्द्रः पिङ्गलायां दिवाकरः ।

इति ।

तासूपि सुषुम्ना मुख्येत्यर्थः ।

उक्तञ्च श्रौतत्वचिन्तामणौ—

मेरोर्वाह्य प्रदेशे शशिमिहिरशिवे सव्यः क्षेत्रे निषेखेमध्ये नाडी
सुषुम्नात्रितयगुणमयी चन्द्रसूर्याग्निरूपा । अन्यत्रापि तयोः पृष्ठवंशं
समाश्रित्य मध्ये सुषुम्नास्थिता ब्रह्मरन्ध्रन्तु यावत् ।

अन्यासां नामान्यपि सारदायाम्—

गान्धारी हृत्स्थिजिह्वाख्या सपूषालम्बुषा मता ।

यशस्विनी शङ्खिनी च कुङ्कुः स्युः प्रसनाडयः ।

आसांस्थितिस्वरूपं योगार्णवे—

इडा पृष्ठे तु गान्धारी मयूरगलसन्निभा ।

सव्यपादादिर्नैत्रान्ता गान्धारी परिकीर्त्तिता ।

हृत्स्थिजिह्वोत्पलप्रेक्षा नाडी तस्याः पुरःस्थिता ।

सव्यभागस्य मूर्ध्नादिपादाङ्गुष्ठान्तमाश्रिता ।

पुषा तु पिङ्गलापृष्ठे नीलजीमूतसन्निभा ।

याम्यभागस्य नेत्रान्ता यावत् पादतलं गता ।

यशस्विनी शङ्खवर्णा पिङ्गला पूर्वदेशगा ।

गान्धार्याश्च सरस्वत्या मधस्था शङ्खिनी मता ।

मुवर्णवर्णा पादादीवर्णान्ता सव्यभागके ।

पादाङ्गुष्ठादि मूर्ध्नान्त-याम्यभागे कुङ्कुमता ।

रावणा सरस्वती विश्वोदरी शङ्खिनी एता अपि प्रधानत्वेनोक्ताः ।

उक्तञ्च—

ताश्च भूरितराख्यामु मूल्याः प्रोक्तास्तुर्दश ।

सुषुम्ने इडा पिङ्गला च कुङ्कुमश्च सरस्वती ।

गान्धारी हृत्स्थिजिह्वा च रावणा यशस्विनी ।

विश्वोदरी शङ्खिनी च ततः पूषा यशस्विनी ।

अहम्बुधेति ॥

शाक्तानन्दतरङ्गिणीधृतज्ञानभाष्ये—

इडा च वामनासायां दक्षिणे पिङ्गला मता ।

सुषुम्ना ब्रह्मरन्ध्रे च गान्धारी वामचक्षुषि ।

दक्षिणे हस्तिजिह्वा च पूषा कर्णेऽथ दक्षिणे ।

वामे यशस्विनी ज्ञेया मुखे चालम्बुषा मता ।

कुङ्कुमलिङ्गमूले स्यात् शङ्खिनी शिरसोपरि ।

एवं द्वारं समीश्रित्य तिष्ठन्ति दशनाडिकाः ।

क्षितिश्चवारितेजाश्च वायुराकाश मेव च ।

स्थैर्यं गताइमे पञ्च बाह्याभ्यन्तर एव च ॥

एवं प्रधाना नाडीनिरूपमानन्तरं शास्त्रारूपनाडी निरूपिता ॥

सारदायम्—

नाड्योऽनन्ताः समुत्पन्नाः सुषुम्नापञ्चपर्वसु ।

सर्वानि स्वाधिष्ठानमणिपूरकानाहतविशुद्धाज्ञानानि ।

तत्र धोऽधोग्रन्थिमारभ्योर्ध्वोर्ध्वग्रन्थि पथेन सर्वसमाप्तिः, गणयितुं-
अशक्यत्वादन्ताः ।

यदाहः—

पूर्वोक्तायाः सुषुम्नाया मध्यस्थायाः सुलोचने ।

नाभिहृत्कण्ठतालुभ्रूमध्यपर्वसमुद्भवाः ।

अधोमुखाः शिराः काश्चित् काश्चिदूर्ध्वमुखास्तथा ।

परास्तिर्यग्गताः काश्चित्तत्र लक्षत्रयाधिकाः ।

नाड्योर्ध्वलक्षसंख्याताः प्रधानाः समुदीरिताः ।

तासु सर्वामु वलवान् प्राणी वायुः समन्ततः ॥

विश्वसारेतु—

नाभेः सकाशाज्जायन्ते नाड्यः क्षेत्रपोषिकाः ।

इडा तु वामभागे स्यादक्षिणे पिङ्गला मता ।

मध्ये सुषुम्ना विज्ञेया चन्द्रसूर्यनलात्मिका ।

नाड्योऽनन्ताः समुत्पन्नास्तस्याः पञ्चसु पर्वसु ॥

इति ॥

नाभेः सकाशादिति यदुक्तं तत् क्षेत्रपोषिका इत्यनेन रसादिचालनेन
शरीरपुष्ट्यर्थं न तु ज्ञानध्यानाद्यर्थं, वायुसाधनप्रकरणे एतत् स्पष्टीकरिष्ये ।

नरपतिजयाचार्यस्वरोदयधृतब्रह्मजामलमपि शरीर पुष्टार्थमेव
नाभौ कुण्डलिनी माह, यथा,—

महाशक्तिः कुण्डलिनी नाडी स्थाऽहिस्वरूपिणी ।
ततो दशोर्द्धगा नाड्यो दश चाधोगतास्तथा ।
हे हे तिर्यग्गते नाड्यो चतुर्विंशतिसंख्यया ।
सूक्ष्ममुखास्ततो नाड्यः सहस्राणां द्विसप्ततिः ।
कुण्डलिन्यां महाशक्तौ मूलमार्गा भवन्तमौ ।
ताभ्यः सूक्ष्ममुखा नाड्यः शरीरं प्रतिपोषिकाः ।
सप्तशतानि जायन्ते सप्तोत्तराणि संख्यया ।
प्रधाना दश नाड्यस्तु दशबायुप्रवाहिकाः ॥

योगियाज्ञवल्करे प्रथमाध्यायेऽपि नाभिचक्रमुपक्रम्य—

कन्दमध्ये स्थिता नाडी सुषुम्ने ति प्रकीर्त्तिता ।
तिष्ठन्ति परितः सर्वाश्चक्रेऽस्मिन्नाडिकास्ततः ।
नाडी नामपि सर्वासां मुखरा गार्गि चतुर्दश ॥

गार्गि इति याज्ञवल्करस्य स्तिर्याः सम्बोधनम् ॥

इडा च पिङ्गला चैव सुषुम्ना च सरस्वती ।
वारुणी चैव पूषा च हस्थिजिह्वा यशस्विनी ।
विश्वोदरो कुहूश्चैव शङ्खिनौ च पयस्विनी ।
अलम्बुषा च गान्धारी मुखरा चैताश्चतुर्दश ।
तासां मुखरातमास्ति सस्तिमृष्वे कोत्तमोत्तमा ।
मुक्तिमार्गे तु सा प्रोक्ता सुषुम्ना विश्वधारिणी ।
कन्दस्य मध्यमे गार्गि सुषुम्ना च प्रतिष्ठिता ।
पृष्ठमध्ये तु तेनास्था सह मूर्ध्नि व्यवस्थिता ।
मुक्तिमार्गे सुषुम्ना सा ब्रह्मरन्ध्रे ति कौर्त्तिता ।
अव्यक्ता सा च बिज्जे या सुषुम्ना बैष्णवी स्थिता ।
इडा च पिङ्गला चैव तस्याः सव्ये च दक्षिणे ।
इडा तस्याः स्थिता सव्ये पिङ्गला चैव दक्षिणे ।
इडायां पिङ्गलायाञ्च चरतश्चन्द्रभास्करौ ।
इडायां चन्द्रमां ज्ञेयः पिङ्गलायां दिवाकरः ।
चन्द्रस्तामस इत्युक्तः सूर्यो राजस उच्यते ।

विषभागो रवेर्भागश्चन्द्रभागोऽमृतं तथा ।
 तावेव तदधः सर्व्वं कालं रात्रिदिवात्मकम् ।
 भोक्त्री सुषुम्ना कालस्य गुह्यमेतदुदाहृतम् ॥
 सरस्वती कुङ्कुमेषु सुषुम्ना पार्श्वयोः स्थिते ।
 गान्धारी हस्तिजिह्वा च इडायाः पृष्ठपूर्व्वयोः ।
 यशस्विनी च पूषा च पिङ्गला पृष्ठपूर्व्वयोः ।
 कुङ्कुम हस्तिजिह्वा च मधेय विश्वोदरी स्थिता ।
 यशस्विन्याः कुङ्कुममध्ये वारुणी सा प्रतिष्ठिता ।
 पूषायाश्च सरस्वत्याः स्थिता मध्ये यशस्विनी ।
 गान्धार्याश्च सरस्वत्याः स्थिता मध्ये च शङ्खिनी ।
 अलम्बुषा च विप्रेन्द्रि कन्दमध्यादधः स्थिता ।
 पूर्व्वभागे सुषुम्नायास्त्वामेद्वान्तं कुङ्कुमः स्थिता ।
 अधश्चोर्द्ध्वं विज्ञेया वारुणी सर्व्वगामिनि ।
 यशस्विनी च याम्यस्य पादाङ्गुष्ठान्तमिष्यते ।
 पिङ्गला चोर्द्ध्वं याम्ये नासान्तं विद्धि मे प्रिये ।
 याम्ये पूषा च नेत्रान्ता पिङ्गलायाः सुपृष्ठतः ।
 पर्यास्विनी तथा गार्गि याम्ये नेत्रान्तमिष्यते ।
 सरस्वती तथा चोर्द्ध्वं हस्तिजिह्वा प्रकीर्त्तिता ।
 आसव्यकर्णा द्विप्रेन्द्रि शङ्खिनी चोर्द्ध्वमागता ।
 गान्धारी सव्यनेत्रान्तमिडायाः सव्यतः स्थिता ।
 इडा च सव्यनासान्तं मध्यभागे व्यवस्थिता ।
 हस्तिजिह्वा तथा सव्यपादाङ्गुष्ठान्तमिष्यते ।
 विश्वोदरी तु सा नाडी तुन्दुमध्ये व्यवस्थिता ।
 अलम्बुषा महाभागे वायुमूला तथोर्द्ध्वं ।
 एतास्त्वन्याः समृत्पन्नाः शिवास्त्वन्याश्च ता अपि ।
 यदश्वत्थदले तद्वत् पद्मपत्रेषु चापि वा ।
 नाडीष्वेतासु सर्वाषु विज्ञातव्या तपोधने ॥
 इति नाड्य त्पत्ति कथनम् ॥

अस्य द्युत्पत्तिकथनम् । —

अध्यात्मविवेके—

अस्यां शरीरे संख्या स्यात् षष्टियुक्तं शतत्रयम् ।
 त्रीण्येवास्थि शतान्यत्र धन्वन्तरिरभाषत ।
 द्वे शते त्वस्थिसन्धिणां स्यात्सप्त दशोत्तरे ।
 पेशीस्नायुशिरा-सन्धि-सहस्रद्वितयं मतम् ।
 नवस्नायुशतानि स्युः पञ्च पेशीशतान्यपि ।
 अधिका विंशतिः स्त्रीणां स्तनयोर्द्दिग्दिगौरिता ।
 शिराधमनिकानान्तु लक्षाणि नवविंशतिः ।
 सार्धानि स्युर्नवशति षट्पञ्चाशदयुता तथा ॥
 इति । इत्यस्य द्युत्पत्तिकथनम् ॥

नाडीमुखस्थानकथनम् । —

रुद्रजामले सप्तदशपटले

तिस्रः कोट्यर्द्धकोटौ च यानि लोमानि मानुषे ।
 नाडीमुखानि सर्वाणि घर्मविन्दुं क्षरन्ति च ।
 इति नाडीमुखस्थानकथनम् ॥

इति आप्राणतोषणां प्रथमे सर्गकाण्डेऽन्नमयकोषात्मकमनुषादेह-
 कथनं नाम चतुर्थः परिच्छेदः ।

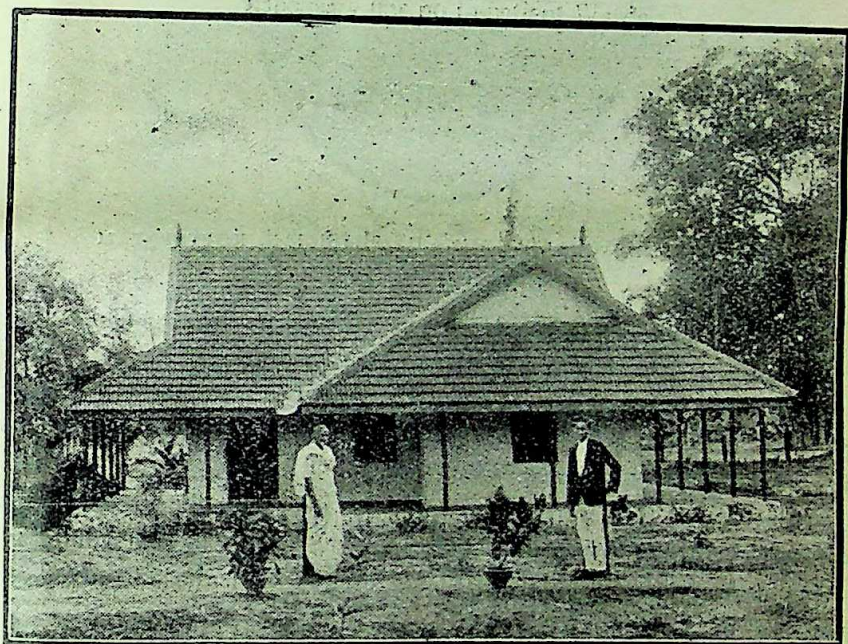
Reports of Societies, etc.

LOCAL FUND AYURVEDIC DISPENSARY Kottapatam.

Building. The Dispensary building is situated four furlongs distant from the Sea-shore with an extensive fenced compound with all kinds of trees in all directions and free from bustle of the Town presenting a beautiful view. Medicinal herbs are being reared within the Dispensary Compound.

Furniture and utensils. The Taluk Board has supplied furniture and utensils to the Dispensary.

Wards. The Dispensary has no in-patient Wards for the present.



A VIEW OF THE KOTTAPATAM L. F. DISPENSARY.

Importance of the Town. The town is 10 miles distant from Ongole Railway Station and Motor cars ply from Ongole to Kottapatam. Kottapatam is the healthiest of all villages in Guntur District. The Dispensary is very popular being situated in the midst of most healthy surroundings on the Sea-shore, it is a health-resort and deserves to be called the Sea-side Sanitorium of the citizens of the District which is now lying unrecognised so near Ongole. It has fine, wide streets, excellent Sea-breeze, good water-supply and other facilities.

Management. The Ongole Taluk Board is maintaining the Dispensary. Although the Dispensary is an Ayurvedic one, Allopathic Medicines are also administered and minor Surgical operations are performed to suit the mentality of patients.



DR. N. KESHAVACHARLU, A M.A.C., PHYSICIAN, KOTTAPATAM
L F DISPENSARY.

Income from patients. No money is taken from the patients who get treatment in the Dispensary as it is a free Dispensary.

Certificates Opportunities have been created to take physical fitness and Sick certificates from authorities of this Dispensary according to the Cr. O No. 709 dated 21st March 1925.

Expenditure. To prove that the cost of Ayurvedic treatment is very much less than that of the Allopathic, I am giving in the following statement the number of the patients treated and the amount spent since 1926.

Year.	No. of Patients				Daily average attendance.	Cost per head per day.	No. of Labour Cases conducted.	Caste of Patients.			Grand Total.
	Males.	Females.	Children.	Total				Hindus	Mah.	O. C.	
						Rs A. P.					
1926-27	10347	5085	4017	19449	53.18	0 0 .3	43	17297	1670	482	19449
1927-28	8941	4500	3027	16518	45.36	0 0 1.5	86	14368	1469	681	16518
1928-29	8634	5470	2660	16770	45.9	0 0 4.3	82	14756	1364	650	16770
1929-30	8622	5464	2315	16401	46.	0 0 4.4	90	14371	1393	637	16401
1930-31	8830	4927	2711	16474	46.18	0 0 4.18	104	14242	1509	723	16474

The above statement is a clear indication that this kind of indigenous treatment is cheaper than Western system of medicine.



STUFF OF KOTTAPATAM L. F. DISPENSARY.

The following gentlemen visited the Dispensary and expressed their admiration for and their appreciation of the glory of Ayurveda and towards this institution.

1. M. R. Ry. B. Janakiram, Retd. Thahasildar (C. P.)
2. " Dr. G. Ramayya Naidu, Assist. Medical officer (C. P.)
3. " Dr. Gopala Sastry, Vice President, Tq. Board—ONGOLE.
4. " J. Thirumala Rao. B. A. L. T— "
5. " Dr. J. R. Wood. C. M. Hospital— "
6. " Rao Saheb V. Sreeramulu Naidu, Ex-President, Tq. Board.
Chairman M. Council—Ongole.
7. " G. Vandanam, B. A. L. T., Corporation Education Officer,
Madras.
8. M. R. Ry. Rao Saheb C. V. Kristna Rao—ONGOLE.
9. " Y. Bharatha Sastry, B. A. M. L. District Munsiff, Narasapur.
10. " Dr. H. Venkata Rao, L. M. & S.—Madras.
11. " Dr. Velan, Inspecting Officer, Indigenous Medical Institutions—Madras.
12. " K. Jeyarama Reddi, Tempy. P. T. B.—Ongole.

13. " G. Ramakantha Charlu, B. A. Tahasildar—Ongole.
14. " U. Sreeramalu Chowdary, B. A. P. T. B.—Ongole.
15. " N. V. Hanumantha Rao, B. A. B. L., Vice Chairman, M. Council, Narsaraopet.
16. " K. Aruna Chalam, M. A., Inspector of Excise, Bapatta.
17. " S. Venkatachalam Chetty, M. L. C.—Madras.
18. " A. Janakiram, B. Sc., Personal Assist. to the Principal, Madras Ayurvedic Collage,—Madras
19. " B. R. Naidu, G. M. V. C. Veterinary Assist. Surgeon.—Ongole.
20. " S. Subba Rao, B. A., Member Advisory Committee, Govt. Hospital—Ongole.
21. " Rev. T. V. Witter, M. A., Missionary, A. B. T. M. Venkataramanayya Podili (Nellore Dt.)
22. " M. Kamigin, B. A., B. Ed., (Do.)
23. " Gouse Mohideen, B. A., Supdt Finance Office (Hyd Deccan).

Following Principals of the institutions sent their highest opinion regarding the work of the Dispensary.

1. Bhishagratna Dr. A. Lakshmi pathi, Principal, Madras Ayurvedic College.
2. Ayurveda Bhushana N. Ramasastry, A. K. A. C., Principal the Ayurvedic College, Bezawada.
3. Kaviraja, Prathivathi, Bhayanker Kristnamacharlu, Principal, Ramamohan Ayurvedic College, Bezawada.

The following Medical Journals have given opinions regarding this institution and its work.

1. The Journal of Ayurveda, Calcutta.
2. Sree Dhanvantari—Madras.
3. Arogya Prakasika—Ellore.
4. Andhra Vaidya Sammelana Patrika—Muktyala.
5. Kowmodaki—Nandyala.

To the Editor,

No. 2, Horokumar Tagore Square, Calcutta.

SIR,

In continuation of the brief history of my dispensary sent already I request you to invite your kind attention for the following information to add these statistics in the statement already prepared, for the year 1931-32, also, otherwise the figures for the previous years without this year will remain meaningless.

Hoping you will comply with my request and do the needful and publish the brief history of the dispensary with all information given, along with the illustrations.

Year.	Number of Patients				Daily average attendance	Cost per head per day.	No of Labor Cases conducted.	Caste of Patients.			Grand Total.	Remarks.
	Males.	Females.	Children	Total.				Hindus	Mah.	O. C.		
1931-32	552	563	653	2072	56.78	Rs. As. P. 0 0 3.12	87	5512	684	218	6414	As I am preparing almost all medicines (Ayurvedic) locally, the costs comes only to 3.12 pies per patient this year.
								For New admissions only.				

Yours faithfully,

N. Kesava Charlu.

BIHAR PROVINCIAL AYURVEDIC CONFERENCE.

The twelfth session of the Bihar provincial Ayurvedic conference was held at Hajipur on the 16th and 17th March with due eclat under the presidentship of Kaviraj Bidhubhusan Sen, Kavyavyakaranatirtha, professor of Govt. Ayurvedic school, Patna. This conference was presided over in the past by such distinguished personages as the Maharajadhiraj of Darbhanga, Maharaja of Amana, Justice Sir Jwala Prosad, Ayurveda Ratnakar Pandit Brajbihari Chaturvedi and others. The president read out an elaborate and learned address in Sanskrit. Besides, there were some papers read and lectures delivered in the meeting which showed the amount of research work carried out in this branch. Several resolutions were adopted for the improvement of Ayurveda. An exhibition of indigenous drugs, minerals and books was held and Mr. K. P. Sinha, M. A., I. C. S., S. D. O. of Hajipur performed its opening ceremony. Rai Bahadur Pandit Mathura Prasad Chaturvedi, B. A., Excise Supdt. of Saran became the Chairman of the reception Committee.

Reviews and Notices of Books

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We have received a copy of "VYADHI VIGNYAN" for review. This book has been written on demand of the students, and on the request of the of D. A. V. College, Lahore, College Managing Committee, as a Text Book in the Ayurvedic College. First part is in our hands, and second part is expected to be available soon. The book has been written by Dr. Ashanand Panjratn, M. B. B. S., Vaidya Acharya, of the above College.

This book is specially meant to give in Hindi language causes, symptoms, and diagnosis of diseases according to the Western medical science, which so far has not been given in any book in HINDI. Special chapters on "ROG PRIKSHA" containing clinical medicines, examination of urine (which every Vaidya can do himself without microscope) and use of Stethoscope etc. are added in the beginning. The treatment in brief is also described with each disease and as well as in general according to both Ayurvedic and Allopathic systems. It has also been tried to give doses, chief actions and directions for the use of such allopathic drugs which Vaidyas usually intend to use in their practice.

The book no doubt serves a great purpose and removes a long-felt want. The style, get-up, illustrations, printing and mode of presentation of the subject matter leave nothing to be desired and we have every reason to believe that the book will have a very good circulation among the Hindi knowing Kavirajes and Students of Ayurveda. The book is priced at Rs. 3-10 only and is available from the author direct or from the publishers, Birat Pharmacy, Chamberlaine Road, Lahore.

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Eugenics And Birth-Control. A Striking, Candid Contribution to Married Happiness and Social Welfare in the Tropics By Mercés Heynes Wood, Assisted by Cedric Dover, The Times Publishing Co., Lahore. 1931, Pp. 120 Price Rs. 3.

In this neat little hand-book, the authoress has fulfilled her intention, that is, to present in a concise and popular manner, the essential characters of Eugenics and birth-control controversy. The book has appropriately been dedicated to the women in the East and to those noble men and women who are devoting their lives to social service.

The book is divided into two parts. Part 1 deals with Eugenics and Birth-control in ten chapters. Eugenics—definition, basis, history, present position, arguments against it, sterilisation of defectives. *Birth-control*—race-suicide, religious attitude, arguments for and against it, Part

It deals with the methods of birth-control, the ideal method, contraceptive technique, the different methods in practice for women in different conditions of life with illustrations and critical study, some formulas, and the evils of quackery. In the Appendix, there is a list of books on the subject for reference.

The appearance of the book is of vital importance to the people of India, both as a contribution to secure domestic happiness, and as a stimulus to the study of race-culture, especially when the people of India want to stand on their own legs. The nation is made up of individuals, and no nation can be great unless the individuals are healthy and strong. Unfortunately race-culture, or bettering of the conditions of life of the human race is unknown now-a-days in India. Race-culture as a science was not however unknown to Indians in ancient times. Elaborate rules were codified to ensure good health, successful marriage and domestic happiness. The dialogue of Yama and Yami in the Rgveda is nothing but a prohibition of marriage amongst blood-relations. The laws of heredity were well-understood, and the system of *Kulinism* is a systematic application, or rather experiment, of the truth of the laws of heredity. It is analogous to a system of scientific breeding of a good stock carried on in a large scale and for a long time, and is a practical application of the theory of Mendel. The object of marriage was considered to be the begetting of healthy children, and a proper regard for posterity was the key-note of all religious and social functions observed in connection with pregnancy and child-birth. The Obscenity Law has sounded the death knell of many useful social customs and ceremonies. As an example we may mention the ceremony of second marriage as it is called. The elderly ladies used to meet together and would impart to young girls the knowledge of sexual science, so that she might be made fit to be the companion of the bride-groom. Sex knowledge was not a prohibitive field of study. The methods of birth-control have been advised through religious ideas and ceremonies, which are still practised in a mutilated condition. Women were generally delivered in their fathers' houses, and she used to refrain from sexual act for at least six months. She would go to her husband's house when the rice-eating ceremony of the child was to be performed in the sixth month. In the lying-in-chamber she would live in confinement for a month. Susruta, the great surgeon, advises us to observe three months as the minimum period when she should refrain from the company of her husband.

The book and the references show that the authoress has cast far and wide for information and description of the contraceptive methods. Her treatment of the subject is thoroughly scientific and she has dealt with the subject in an up-to-date manner; and what is more, she has

always evinced her sympathy for her sisters in the East, and there is scarcely any remark which may offend their sensibility.

The book will serve its purpose well, offering, as it does, clear exposition of the chief facts of importance in connection with the subject. All social workers will find the book interesting and of value.

The style is lucid and simple; technical words have been avoided as far as possible. The printing, paper and the illustrations are good, and the price moderate. The book should be translated in the vernacular languages of India, and should be placed by all well-wishers in the hands of youngmen and women.

G. N. M.

Reviews and Notices of Drugs

—:o:—

ANACIN

Anacin present in tablet form the following long established combination, proved to be effective for the relief of pain.

Para-Acetphenetidin (Acetanilid Derivative) 3 gr. per tablet

Acetylsalicylic Acid

Caffein

Quinine Sulphate

The ingredients act in a different way in relieving pain and according to the well established law of Burgi, when we combine agents that produce a certain effect by affecting different structures, we obtain increased potency.

In Anacin a valuable combination is presented in the actual balanced dosage, many times more effective than other tablets for the relief of pain. Anacin is not habit forming as it contains no narcotics.

Anacin is indicated in Dentistry

At their own individual requests, we are supplying more than 40,000 leaders and masters of the dental profession with Anacin tablets. This is abundant proof of its universal acceptance by the dentist, and its value to their patients for the relief of pain.

Packings

Anacin is available in tin containing 12 tablets, in bottles of 50, 100, 250 and 500 tablets. Also in envelopes of one and two tablets.

Anacin is a product of—

Made in U. S. A

THE ANACIN COMPANY

Chicago U. S. A.

THE JOURNAL OF AYURVEDA

Vol. VIII.]

May, 1932.

[No 11

Preparing for 'The Baby'

A FEW WORDS FOR THE WOULD-BE MOTHERS.

BY

A DOCTOR WHO IS A MOTHER.

To build beautiful, healthy, spirited and happy babies is the *summum bonum* of the married state.

Opinions widely vary as to the degree of influence exercised upon the child by conceptional and ante-natal conditions, and by the maternal state of mind. But experience has shown that whatever disturbs, starves or pollutes the bloodstream adversely affects the unborn child, giving it a bad start or laying a poor foundation to mental, nervous or physical health. This fact makes it perfectly plain, then, that the woman to whom pregnancy is possible or who is already *enceinte* should :

1. Love her offspring with every fibre of her being : not super-possessively in a manner to wrap or cramp its true personality, but courageously and understandingly.

2. Make and keep her body a fit temple for the wondrous work of baby-building and the launching of a soul.

3. Joyously and willingly bear whatever transient discomforts and renunciations that maternity may bring and be confident that she will do her job perfectly well.

4. Regard the ultimate act of birth with brave serenity.

5. Deliberately close her ears to all "old wives' tales" and accounts of so-called complicated confinements, at the same time observing and comparing the different departments of pregnant women and the different methods of

handling infants. Definitely seek to gain knowledge in everything relating to the wide subject of mothercraft.

6. *Cultivate a warm-hearted and cheerful outlook, a broad, sunny horizon even in the face of difficulties, and not think or talk about one's conditions as that of illness.*

7. *Cultivate the ability to relax completely when a short spell of repose seems indicated, and master that tendency to irritability which often comes to the pregnant woman and if encouraged, will surely grow into habit that may ruin lactation.*

Now I will just deal briefly with those disagreeable but transient maladies which some pregnancies involve. Morning sickness, first. Many women, having felt conception has occurred and possibly missed a date, begin to expect nausea and morning sickness. This is silly, because the mind so reacts upon the body that sickness can actually be produced in this manner.

Remember that a clean and smooth-working digestive tract means fitness, purity of blood, clearness of mind and sound nerves. It is plain then, that in the early weeks of pregnancy one's chief concern should be the establishment of perfect elimination of waste. Baby is fed through the blood-stream of the mother : so let the maternal blood be poison-free, rich, vigorous and fully charged both with live elements and oxygen. Natural means are always the best, so I mention natural ways of achieving an elastic, vigorous intestine.

Drink an abundance of fresh water. Take plenty of fresh fruit, salads, green vegetables and butter, cut down sugar and starchy foods ; eat stoneground, wholemeal flour only in your bread, and practise the following movements—

Take a deep, gentle breath and draw in the abdominal wall on every possible occasion ; begin with twice and increase to ten times. With hands on hips smoothly bend the trunk over from side to side. Place the feet well apart have knees and ankles loose and rhythmically rotate the

lower part of the body. It should be followed by lying face downwards with a cushion beneath the body, and another for the head and arms to be comfortably disposed upon. Ten minutes' relaxation in this position brings a wonderful feeling of freshness. The woman who needs must do her own floor-cleaning on hands and knees is fortunate, to a certain extent, for the quadruped posture is very good for us to assume occasionally. It allows of the contents of the abdomen to be slung in a natural way that strengthens the broad ligaments and the spine muscles, and aids in the discharge of waste.

If, however, sickness does persist and your condition be normal, do *not* let it worry you. Eat small quantities of what you fancy when you feel like it ; and try to keep your mind occupied. I can assure those who suffer with pregnancy sickness, that rarely does the baby suffer if what food the mother takes is full of nutriment and is readily assimilated. One woman I know could keep nothing down for the first three months and a half except small draughts of soda and milk, and an occasional egg, a little fish and lemon juice and grapes. With the quickening all sickness vanished ; and she enjoyed a perfect digestion right to the end ; and her baby was wondrously fit and plump.

Foodstuffs which should be rigorously reduced just now and during lactation (if not permanently) are : sweets, meat and potatoes, rich dishes, starchy things and condiments.

If the maternal diet be deficient in vitamins and mineral salts and fats, before the developing embryo goes short, it will rob the mother of the necessary elements. This means that she cannot feed her babe, that she will be prone to neuralgia, haemorrhage and general debility besides emaciation and exhaustion, and dental caries. The child, who, having taken all it can get from the maternal blood-stream and yet remains short of calcium, vitamins and fats is the undeveloped, weak-hearted,

catarrhal, rickety baby who is a constant source of anxiety to rear and then falls below normal standards. Mineral salts are found largely in raw vegetables and salads, fruits and milk, which also provide calcium. Olive oil and fresh butter, wholemeal stoneground flour and pulses in moderation give fitness and vigour, firm bones and good teeth and ensure a robust delivery with satisfactory lactation to follow.

If a woman be used to swimming, she need not renounce them now. But strict moderation and absence of strain should be her watchword in all things, doctor having satisfied himself that everything is well and normally progressing. On the other hand, the wife who is lethargic or who leads a too sedentary life or who is self-indulgent in her habits, must bestir herself and discipline her life.

Daily walks are essential to health and happiness, but two small walks are better than one long tramp. Housework of all kinds, especially bed-making, sweeping and mopping, are very beneficial. It is important that the expectant mother moves with rhythm and freedom; hanging on some one's arm should not be practised unless there be weakness or some faultiness in uterine position which necessitates it. Should there be discomfort in walking and moving, medical attention must at once be drawn to the fact; and any discharge or loss reported and treated by bed till further orders.

Standing about is harmful and wasteful of energy. The carrying of heavy things is to be condemned, because it strains the ligaments and pushes the gravid uterus downwards. Reaching up is not harmful, provided there is no strain and the whole of the body above the hips is lifted also. This is the correct way to reach.

Rest and sleep are important factors. It is better to lie down upon the floor or a divan—often with the legs and thighs well raised on some support—for half an hour, than to flap and lounge about all anyhow for hours during the day.

In rare instances when shortage of sleep affects the nerves, causing depression or neuralgia, and the root of the trouble is neither constipation nor a septic focus in the mouth, general massage is helpful. One should lie at night on a firm, hardish mattress which gives complete restoration to spine and organs, while the aid of extra pillows should be sought in gaining maximum comfort. Windows should be wide open and a drink should be handy. In cases of cramp it is helpful to rise slowly, put the feet to the ground and rub the thighs. Returning to bed, the knee-and-elbow position should be adopted for a little while.

Not the least of the mother's preparations is that which concerns her breasts. Many a baby is indifferently fed or forced to be weaned through failure on the mother's part to get her breasts ready for the business of sucking, and many a new mother suffers agonies with cracked nipples that weren't prepared. Begin twice a day to stroke the breasts with a wide circular motion round and upwards from the armpits. Bathing in cold water is a fine stimulus and it is not too early at three months to commence scrubbing the nipples with a soaped nailbrush. The nipples should be then rolled gently between finger and thumb and lubricated with olive oil. If nipples are inverted they should be drawn out firmly.

Apropos of olive oil—if the thighs and abdomen be massaged several times a week with olive oil there'll be no ugly markings!

Plenty of warm and tepid baths are excellent, and cold sprays are most tonic to the expectant mother. Towards the end of her time, the expectant mother should make a point of having a sitz bath daily. Brisk friction of the skin until it glows, currents of fresh air upon the whole of the body do un-questionable aid in blood-purification and toning up of the body and, therefore, in helping towards a good birth and a fine babe.

From the Calcutta Municipal Gazette.

Original Articles

AYURVEDIC THERAPEUTICS OR THE SCIENCE OF RASA, VEERYA VIPAK AND PRABRAVA.

BY

VAIDYABHUSHAN PURUSHOTTAMSHASTRI HIRLEKAR,

AMRAOTI

*and translated from his Marathi compilation by Ayurveda-
charya Pandurang Hari Deshpande, Poona.*

APPENDIX I.—ANURASAS OF UPARASAS.

The portion of the substance clearly perceived by the tongue is called "Rasa" and its six varieties such as Madhura, Amla etc., have been already enumerated. Among these six Rasas, that which gives clear perception of any substance is its proper Rasa, though one or more Rasas may also be additionally perceived and it cannot even be said that the rest (unperceived) do not exist. Really every substance consists of all six Rasas, but it is supposed that amongst them, those which are clearly perceptible only act on the human body.

Among those that are not clearly perceptible, some are totally imperceptible, but such of those which are not clearly perceptible can be said to have been effecting some action or the other on the body. Such Rasas (not clearly perceptible) are called *Anurasas* or *Uparasas*. Some substances contain such Anurasas and some do not, but those which contain do show somewhat different effects. The Anurasa (such as Madhura Anurasa etc.) of a certain Rasa will effect rather broadly that action which would have clearly been effected by that particular Rasa, or to speak correctly the action of any substance is felt of the Rasa vividly manifestable along with that of the Anurasa. So then it need not be said that the action of an Anurasa is rather unclear as it in itself is unclearly perceptible in the substance. While the main Rasa gives perception, some other Rasa does give perception, though slightly, and so it cannot be said that it is in very small degree and, therefore, it is impossible not to

get experience of its action on the human body along with that of the main Rasas. If this action is contrary to the action of the main Rasa, it must be well considered, as the action of the main Rasa will be less effective and lose its importance.

Among the Anurasas also, two kinds are possible, one in similarity and the other in contrariness to the main Rasa. The former will be helpful and strengthening and the latter resisting and weakening the action of the main Rasa.

The similar Anurasa can be experienced along with the original Rasa but rather indistinctly, while the dissimilar Rasa can be experienced at the end of the original Rasa. So also it is clear that the actions of these two Anurasas can be experienced at different times. The action of the similar Rasa being helpful to the original Rasa can be experienced along with it, while that of the dissimilar afterwards. These two different varieties of Anurasa are mentioned in the verse as

अव्यक्तोऽनुरसः किंचिदन्ते व्यक्तोऽपिचिष्यते । (च. सू. अ. १)

meaning, that is the Anurasa which is the indistinct part of the substance as also that which can be felt afterwards.

It is, therefore, essential to take into consideration the actions of Anurasas along with those of the Rasas, at the time of settling the actions of substances upon the human body. If a substance is of the Madhura Rasa and if it has a separate Anurasa but similar to the Madhura Rasa, it will be helpful to bring about the action of the Madhura Rasa, readily and effectively. For instance, Pomegranate (*Punica Granatum*) is a fruit which has Madhura as its main Rasa but Amla and Kashaya are its Anurasas. The Amla Rasa is similar to the Madhura Rasa while Kashaya is dissimilar to it. The Madhura Rasa is not displeasing but somewhat pleasing, remover of Vata and producer of Kapha are two common properties in the Madhura and Amla Rasas, while Amla is more tasteful and stimulant. In the case of Dyspepsia where tonic is essential, but loss of appetite is along with it, a substance of Madhura Rasa will never be effective, because Madhura Rasa is rather slow to be digested and it is not even relished on account of tastelessness of the tongue,—in such a case the assistance of Amla Rasa, which possesses tasteful and stimulant properties, becomes effective. Relish on account of its tastefulness and stimulance on account of its digestiveness, being the two properties very essential in such a case, help the Madhura Rasa which brings about the nutritious effect. The sourness of the

Anurasa in the Pomegranate being in small degree, the nutritious action of the Madhura Rasa is not hampered. It is, therefore, that pomegranate is of stimulant, digestive and tasteful properties. But it is not so much nutritious as expected because there is also Kashaya as its another Anurasa which is opposed to the nutritive property of the Madhura Rasa. Of course, this astringence being of the Anurasa, having been felt at the end, the pleasing action of the Madhura Rasa

आस्वाद्य-मानो देहस्य ह्लादनः । (वा. सू.)

is sure to be felt at the beginning. The stimulant action is effected on account of the Amla Rasa but due to the Kashaya Anurasa which is also felt along with it, the nutritious action of the Madhura Rasa is left out. It is, therefore, a triple action of the Pomegranate that takes place as removing Vata by the Madhura and Amla Rasas, removing Pitta by the Madhura and Kashaya Rasas and removing Kapha by the Kashaya Rasa only,—thus in all helping to adjust the deranged condition of the three Doshas and is so extolled in Ayurveda.

Ataroosha (Adhatoda Vasica) has Tikta Rasa but having Kashaya as its Anurasa, its action is not of the Tikta Rasa alone but effects action of these two combined. Purification, clarification, cleanliness are the properties of the Tikta Rasa, but the property of constipating that is in Ataroosha is of its Kashaya Rasa; so also there is Katu, a somewhat Anurasa and so Ataroosha becomes somewhat piercing. Its properties are stated thus :—

श्वसकासज्वरच्छर्दिमोहकुष्ठक्षयापहः ।

वासो तित्ता कटुः शोता कासघ्नी रक्तपित्तजित् ।

कामलाक्षवेकुल्यज्वरश्वस क्षयापहः ॥

meaning it cures Bronchitis, Vomiting, Fainting, Skin Diseases, Consumption, Scurvy, Jaundice and Asthma and removes Kapha; out of these curing Scurvy is due to Kashaya Anurasa as restraining and healing properties are required for the cure of Scurvy and both of them exist in the Kashaya Rasa, and not in the Tikta Rasa. So also its somewhat bitter rasa brings about its piercing action which helps to remove the thick phlegm in Bronchitis and bile in Jaundice. In all, Ataroosha is possessed of purifying, restraining and piercing properties which are due to its combined Rasas,—bitter, astringent and pungent. This will enable the reader to gauge the Anurasas and their actions on the human body. It will then be clearly understood that while describing the action of

a substance as from its Rasa the same may be finally settled by taking into consideration the action of the Anurasas. It is, therefore, that Anurasas like the Rasas must be fully known. Truly the action of the Anurasa is the same as that of the similar Rasa but in less degree, so it must be ascertained whether the Anurasa is similar or otherwise before its properties are gauged.

The Veerya of a substance is also changed by these Anurasas. If a substance has one clear Rasa, its Veerya will accordingly be one only. But there cannot be only one Rasa in the substance, a combination in more or less degree of more than one Rasa exists in it. It is, therefore, that many varieties of Veerya have been told, though two only are said to be Veeryas of any substance. Having told cold and hot as two Veeryas, greasy, dreary, heavy, light, mild and strong are said to show the comparative sub-classes of it and can be formed on account of the various combinations of the Rasas and Anurasas.

In the innumerable substances there are only two kinds of Veeryas—*Ushna* and *Sheeta*—but there are comparatively many varieties and so the action of every substance upon the human body is of different form. One substance is of *Sheeta Veerya* and has *Snigdghata* along with *Sheetata*, while another has *Rookshata* along with *Sheetata*. One substance being of *Ushna Veerya* has *Kharatvam* while another of the same *Veerya* has not got it. This is what is said to be the relativeness of *Sheeta* and *Ushna Veeryas* which is due to the variety of combination of the Rasas and Anurasas in the substance.

EXAMPLES.

I. *Shyonak (Croxylum Indicum)*

Text Properties:

दृग्गुणो वातजिद्रुचः शोफहायिवलप्रेदः ।

तुवरः शीतलास्तिको वस्तिरोगहरः परः ॥

पित्तक्षयभाभवातारिः खासकासरुचीर्जयेत् ॥

In this description *Syonak* has been said to be *Sheeta* and *Rooksha*. Really *Sheeta* and *Rooksha*—the two varieties of *Veerya* do not belong to the same class but the Rasas of this substance are *Kashaya*, *Tikta* and *Katu*. So, possessed of *Rookshata* as also having *Katu* as one of its Rasas, *Sheetata* is possible due to *Kashaya* and *Tikta* Rasas with it. Evidently, this *Sheetata* cannot be of the same type as that of the *Madhura Rasa* or *Snigdgha*

Veerya, but it can clearly be noted that it has so much Sheetata on account of the abovenoted Rasas so as to make it clear that it has not got hotness which is always with Rookshata.

3. Kumari (*Aloe Indica*)

कुमारी मेदिनी शीता तिक्ता नेम्बू रसायनी ।

सधुरा वृंहणी बन्धा वृष्या वातविषप्रणुत् ॥ १ ॥

गुल्मघ्नी हृत्पित्तकफज्वरहरि भवेत् ।

प्राग्निदग्धविस्फोट..... त्वग्निदान् ॥ २ ॥

In this description of the properties of Kumari one specially notable contrary property can be seen, and the same is that Kumari even being Sheetata effects the action of tearing (मेदन). It is due to this tearing property that it is indicated in enlargement of the liver and glands.

The tearing property is not due to sweetness nor to bitterness and in the description of properties no other Rasa or Anurasa has been given. It must, therefore, be well considered how Kumari possesses this property.

The act of tearing is due to the severe property of Veerya. This severity exists in pungent rasa, so also it can be found in the severe form of the bitter rasa. The bitter rasa of Kumari is exceedingly severe and the same can be known from its vehement odour. This vehemence is really severity. Besides, there is also some tint of pungence in Kumari, but the same is not given in the above description though we do not understand why it should not have been given, so also it is not told in the above description that Kumari is of severe Veerya.

From these properties of Kumari, one thing can be concluded that according to the combination of Rasas in the substance, the active Veerya of the substance varies according to the Uparasas or Anurasas. It is, therefore, that the knowledge of Anurasas, just as that of the Rasa, is essential for getting an idea of the kinds of Veerya.

IDEA FORMED FROM THE VARIETIES OF VEERYA ACCORDING TO THE COMBINATION OF RASAS & ANURASAS.

Rasa	Anurasa	Common Veerya of the Rasa	Specialities.
I. Sweet	Sour	Cold	Digestive, stimulant.
"	Bitter	"	" & purifying.

<i>Rasa</i>	<i>Anurasa</i>	<i>Common Veerya of the Rasa</i>	<i>Specialities.</i>
Sweet	Pungent	Cold	Digestive, & piercing.
"	Salt	"	" & Oozing.
"	Astringent	"	Restrainer.
II. Bitter	Pungent	Hot	Severe, Oozing, piercing,
"	Astringent	"	Slow, Restraining & Healing.
"	Salt	"	Severe, Oozing.
etc.	etc.	etc.	etc.

The properties—piercing (Vyavayita), Spreading (Vikasita), laxativeness (Satata), oozing (Abhishyandita), digestiveness (Pachakata), are possible in the severe stage of sour, bitter and pungent rasas.

The main Rasas of substances so also the Anurasas are fixed viz. six. But as their proportion in substances is different, Veerya according to them, though fixed, is of different forms. It is, therefore, that the relative difference of Veerya should be recognised as per the proportion of Rasas and Anurasas, even though a broad idea of Veerya may be had. And then it will be seen that as there is innumerable combination and proportion of Rasas and of Veerya according to them in substances, the action of these substances in accordance with them is also of innumerable infinite nature. This action can only broadly be gauged by outwardly knowing the Rasas and Anurasas, but for the sake of clearly understanding the properties of substances, the relative proportion of Rasas and Anurasas in them must be fully recognised. It is, therefore, said by the Ayurvedists

ते रसानुरसतो रसभेदाक्षारतम्यपरिकल्पनया च ।

संभवन्ति मगनां समतीता

दोषभेषजवशादुपयोग्याः ॥ १ ॥ (अ. ४.)

(i. e. as there can be innumerable varieties of Rasas according to the Rasas and Anurasas and their relative combination, they should be brought into use according to the Desha (disorder) and an efficacious medicine to remove that disorder.

(To be continued).

AMARASA

BY

KAVIRAJ SACHINDRA NATH CHATTERJI, BIDYABHUSANA,

VIDYASASTRA PITHA,

Kailas Bose Street, Calcutta.

In the science of Ayurveda, mention has been made of two stages, the आम and पक्वावस्था of many diseases. In treatment also, prescription of medicines is different according to different stages. आम requires पाचन medicine, whereas निराम requires शसन. It has been said, 'सामे पाचनं निरामे शसनं ।' साम is that disease which is attended with आम, that is, the stage of the disease in which it is attended with साम is आमावस्था. But if the disease is not cured even after disappearance of आम, it is निराम. पाचन medicine is prescribed in आम. पाचन is that medicine which, when taken, corrects the आम. शसन medicine is applicable in the निराम stage. The medicine which when applied cures a disease is termed शसन ।

Hence we find there are some diseases which are mixed up with आम. Disease originates the irritated disorder of वायु, पित्त, कफ । When this आमरस becomes mixed up with दोष, it is called सामदोष and the disease is सामरोग । If आम be digested, आम relationship of दोष disappears and it is निरामदोष । If the disease be not cured, then the disease is called निराम ।

Now the question is, what do we mean by आम ? Generally, by आम we mean raw or acute. Pointing at it, a group of savants say that the primary defect of दोष is called आम । "प्रथमा दोष दृष्टिश्च केचिदासं प्रवचते ।" In the topic of dyspepsia, mention has been made of one kind named आमाजीर्ण । In that case, food is not digested as it cannot be secreted with the decocted (पाचक पित्त) digestive juices. Here undigested food is the cause of आमाजीर्ण । What has been referred to as आमरस in Ayurveda and what is the cause of सामदोष or सामरोग are neither of these two.

"आहारस्य रसः शेषो योन पक्वोऽग्नि लाघवात् ।

स मूलं सर्वरोगाणां इत्याभिधीयते ॥"

The food we take becomes digested by gastric juice and is then forked into प्रसाद and क्लृप्त ; of which the former is termed अन्नरस (food juice). As soon as it is begot, it is absorbed by whole of

the body from the आमाशय । It has been mentioned in Chrak-sambhita :—

“आमाशय गतं पाकं आहारः प्राप्य केष्वनम् ।

पक्कः सर्व्वांशयं पश्चाद् धमनीभिः प्रपद्यते ॥”

चरक—विमानस्थान, २४ अध्याय ।

This food juice pervades the whole body and causes nourishment.

“पुष्यन्ति त्वान्धारमात् रसकधिरमांसमेदोऽस्थिमज्जयुक्तौजांसि पञ्चेन्द्रिय द्रव्यानि धातुप्रसादसंज्ञकानि शरीर सन्निवन्धपिच्छादयथावयवाः ॥”

चरक—सूतस्थान, २८ अध्याय ।

Food juice being digested is transformed into रस, रक्त etc. So long as it is not changed into them, its character of food is not lost and consequently does not get the quality of शरीर धातु । When one kind of matter is transformed into another, some dross must come out of it. At the time of digestion of food juice into रसधातु, its dross comes out as urine.

‘किङ्कमन्नस्य विन्मूत्रं ।’ चरक—ग्रहणी-चिकित्सा ।

In Ayurveda, by urine we mean useless acquatic portion ; whereas, the occidental science avers urine as the mixture of uric acid, urea, ammonia etc. But as they are not related as parts to the whole regarding urine, they cannot be called its constituents. They exist concomitantly ; it has been admitted in Ayurveda. Regarding the function of urine, Sushruta says, ‘किङ्कमन्नस्य विन्मूत्रं ।’

Regular combustion in the body generates dross and urine washes out. Thus it acts as an antidote.

During transformation of kind of one matter into another, it requires concoction which is performed by heat. Bodily heat comes down by taking medicine which causes loss of heat ; which consequently affects digestion. So food-juice cannot be transformed into रसधातु । Therefore, as a result of the prevention of the coming out of urine, above mentioned dross also cannot come out and spoils the food-juice. This spoiled food-juice has been called आमरस । It may grow in two ways. It has been mentioned formerly that the digested food is absorbed from the आमाशय ; but when obstructed, it remains stored up within the आमाशय and becomes virus. As a result of non-absorption in the body, the dross cannot come out through the agency of urine and effects poisonously.

Secondly, if the food-juice after absorption in the body be not separated from urine, it takes a form of *आमरस*. In all diseases, arising out of *आम* such as, fever, dysentery, Rheumatism, gout etc., diuretic treatment is advised. This *आमरस* may come from the body to stomach and thence it is absorbed in the body. पाचन medicine of which reference has been made formerly in case of *आम* helps combustion of *आमरस* and thus separates it from urine on the one hand ; on the other, its current being checked, it is purified.

WHAT ARE VITAMINS

AND HOW ESSENTIAL ARE THEY TO HUMAN LIFE ?

BY

DR. D. T. QUIGLEY, M.D., T.A.C.S.

"Only through an understanding of the vitamins, our food should contain, can we bring the human race through the morass of Physical Weaknesses and Degeneration of to-day and save it from ultimate destruction !

VITAMIN

A Stands for Clear Eyes and Long Life.

B Stands for Steady Nerves.

C Stands for Strong Muscles and General Health.

D Stands for Sunshine and Sturdy Bones.

E Stands for the Propagation of the Race.

Vitamin *A*, found principally in milk, butter, animal fats and yellow-colored vegetables, protects us against eye diseases and blindness.

Vitamin *B*, found principally in wholewheat bread, bran and brown rice, protects us against beri-beri which once decimated the Japanese army.

Vitamin *C*, found principally in lime and other citrus fruits, protects against scurvy which used to attack sailors on long voyages.

Vitamin *D*, found principally in unadulterated sunshine and cod-liver oil, protects us against tuberculosis, and our children

against rickets. This is the vitamin that builds healthy bones and strong teeth.

Vitamin *E*, found principally in the oil contained in the germ of wheat, and green lettuce, protects against Childlessness.

Perhaps the most important single thing governing the health of the human race is the vitamin content—or, as in many ill-advised cases, the lack of vitamin content—to be found in our daily food.

“Vitamin” is a word all of us have heard a great deal of in the last ten years, yet it is also a word that the average person would be hard put to define.

It is, therefore, the purpose of this introduction to briefly give the reader some idea of what modern medical science and modern dietetics understand by the five vitamins—*A*, *B*, *C*, *D*, and the one about which we know the least, *E*.

If the kind of food we eat every day is deficient in any of these vitamins, and that deficiency is not in some way supplied, the result may be most serious, as later I shall point out in detail. In other words, if we do not get enough vitamin *A*, our bodies will suffer in certain definitely proved ways which, if not checked by supplying the necessary vitamin content to our diet, may result in grave illness and even death.

It is obvious, therefore, that we should know something about vitamins, what foods they are present in, the constancy and quantity, so that our bodies may be properly nourished—for the only answer we can ever make to death is life that is vibrant and strong, the life that sufficient vitamins will support and make glow.

We are here presenting the first part of one of the most valuable scientific studies of the year on the essential nature of the vitamins as health regulators, and how we can recognize them in every day existence, written by a well-known medical research worker and Roentgenologist, whose contributions to our knowledge of the basic necessities of human life, as well as the cause of cancer, are noteworthy.

In treating the vitamins I shall put *B* before *A* because *B* was first to be discovered.

Vitamin *B* deficiency has caused much illness and many deaths. The effects of vitamin *B* deficiency were first brought to public notice in the epidemics of beri-beri which were common occurrences in Japan and China about half a century ago. At

one time, about half of the personnel of the Japanese army and navy were ill with beri-beri. The deaths were in the hundreds of thousands. Scientists from all parts of the world went to Japan and Eastern China to study the disease. It was finally determined by experiments made on pigeons that the pigeons fed on polished rice developed the same disease that afflicted the humans. It was also found that the experimental pigeons might be cured by supplying the washings and polishings from the bran which had been removed from the rice. It was also found that substituting brown rice for white rice cured the animals after they had developed the disease. The information was given out that rice was the cause of beri-beri.

This idea met with considerable opposition. The argument was brought forward that rice has been the food of the Orientals for many thousands of years. How was it possible that it could be the cause of a disease that had appeared at a relatively recent time? It was pointed out, however, that within recent years the natives of this part of the world had changed their habits in regard to rice. Where formerly they had eaten brown or unpolished rice, at the time of the epidemic their food consisted mainly of white rice. The substitution of brown for white rice in the countries which had been afflicted by beri beri completely changed the situation in regard to this disease so that at the present time relatively few cases are seen. In most of the Eastern rice-eating countries at the present time there are laws which prohibit the sale of white rice.

Beri-beri is a disease which primarily affects the nervous system. It exhibits its symptoms by painful affections ordinarily called neuritis, and these painful conditions are followed in due time by paralysis of certain sets of muscles. This paralysis grows progressively worse until the afflicted person dies.

The fact that a disease which has proved a great scourge in the East was definitely due to a food deficiency opened up the question as to whether or not other diseases might be due to this same cause.

Some time later, another disease, called pellagra, was found to be due to a Vitamin B deficiency. The most common symptoms of pellagra, which also affects the nervous system and brain, are a reddening of the skin, digestive disturbances and varying degrees of mental disease leading to actual insanity. It has been a great scourge in Spain, Italy and in the southern part of the

United States. Investigations have definitely proven pellagra to be due to a diet deficiency and established the fact that, in the early stages, it can be cured by a corrected diet.

Vitamin B is really composed of several elements, but in order to avoid confusion it is best to retain the composite name of "Vitamin B" and describe it as containing three different factors, anti-pellagra, growth-promoting and nerve-nourishing. The rapidity with which vitamin B deficiency becomes apparent when food containing this element is withdrawn indicates that the body has only a limited capacity for storing this vitamin.

Vitamin A was discovered by McCollum and Davis in 1915. They found that certain laboratory animals which were deprived of such foods as butter and other animal fats developed an eye disease which eventually led to blindness. They found that an animal which had definitely developed the eye disease might, if taken in the early stages, be cured by restoring the proper food. These food investigations showed that the protective element which they were studying existed also in certain fruits, yellow-colored vegetables and the green leaves of vegetables. They found that not only would eye diseases develop when this substance was lacking in the diet but also that certain other parts of the body would become diseased, and the character of the disease in these cases was in the nature of an infection.

The anti-ophthalmic vitamin, found principally in the foods mentioned above, came eventually to be called vitamin A. At the present time it is considered one of the main elements in protecting in a basic manner against all infections. It undoubtedly has a very decided effect in protecting against the infections which cause ordinary colds, and which localize in the nasal cavity, the throat and the respiratory tract.

The body has the power of storing vitamin A to a considerable extent for future needs. An abundant supply of it in early life undoubtedly safeguards the body against later infection as well as provides for present needs.

Vitamin C is the good factor that has to do with the prevention of scurvy. Scurvy is one of the earliest diseases in human history. The disease formerly afflicted mainly sailors who went on long sea voyages and were therefore denied fresh fruits and vegetables. Something over a hundred years ago, the British navy started serving its men an allowance of limes. It had been found that limes acted in a protective way against scurvy. Lemons,

oranges and even raw potatoes were also found to have this protective action. It became a well-known fact in medicine that scurvy might be prevented by citrus, some raw vegetables and certain green leaves.

While scurvy was a disease principally of seafaring men, there were many examples of the disease occurring inland. At a fort situated ten miles north of Omlaha were stationed some years ago a company of two hundred men. In a time period of something less than a year, over half of these men died of scurvy. They had been subsisting on food that they had brought with them in their wagons from the East. This food consisted mainly of white-flour products such as white bread, biscuits and pancakes, salt pork, sugar, potatoes and corn meal. In the midst of abundant vegetation which contained the elements necessary to protect them against scurvy, these men sickened and died because they lacked the necessary knowledge.

During the Civil War, the Confederates had two prisons, Andersonville and Libby, which furnished many extreme cases of scurvy. In these prisons the captured Union soldiers were kept on a diet which consisted mostly of cornmeal mush. These men were allowed to be outdoors, so they received a sufficient amount of sunshine, fresh air and exercise. The disease manifested itself first by soreness in the mouth and looseness of the teeth. This became worse until the teeth dropped out. Ulceration developed on the hands and feet. In the old histories of Andersonville and Libby many pictures may be seen where fingers and toes have sloughed entirely off, and there were some cases recorded in which feet and hands were lost because of this disease. These illustrations depict scurvy at its worst. They picture only the extreme cases. Scurvy is definitely a vitamin C deficiency. As in the case of ophthalmia, and in the case of beriberi and pellagra, this disease also may be produced experimentally in laboratory animals, and may be cured by supplying them with the necessary food elements. The capacity of our bodies to store vitamin C is very limited, due mainly to the fact that this vitamin is very easily destroyed by heat and oxidation.

Vitamin D is an important element in animal life which has to do with the building of healthy bone, and may be derived from food or from exposure to sunshine. Evidently in the past history of the human race, vitamin D has been derived from

sunshine rather than from food. During the few generations the human animal has lived with his skin protected from sunshine, in other words, since the human animal has learned to wear clothing, nature's source of vitamin D has been almost entirely shut off. During this same period of time, certain physical degeneration has taken place. Bone development has been so deficient that nearly eighty per cent. of all school children now show visual evidences of the disease called rickets. In this same period, tuberculosis has come to be a very common disease. The many diseases that are traceable to tooth and mouth pathology, and which are grouped together under the common name pyorrhea, are caused in a degree by vitamin D deficiency. Vitamin D is the only vitamin which we know about chemically. It has been found to be irradiated ergosterol. Ergosterol itself is a definite chemical substance and is inert but after it has been subjected for a certain period of time to sunshine or ultra-violet light some change takes place in the ergosterol and vitamin D is manufactured.

The foods containing vitamin D are so few, and the vitamin D content is so unreliable, that no common food can be considered as a bearer of vitamin D at all times. This vitamin is to be found in egg-yolk, but the finding is not constant. It is found in milk and butter, but these also are not constant sources. It seems that eggs and milk may contain vitamin D in small quantities during the season that the animal is exposed to considerable amounts of sunshine, or when it is eating foods containing the vitamin. During the time of the year in which sunlight is weak, no vitamin D is to be found in animal products unless it has been taken in with the food of the animal. Within the last few years, an attempt has been made to produce vitamin D in cereals by exposing them to ultra-violet light. It seems that in doing this a part, or all, of the other vitamins contained in the cereal may be destroyed, so it is questionable whether anything is gained by this procedure. Vitamin D may be obtained from cod-liver oil. It exists also in many other fish-oils. These oils, however, are to be classified as medicines rather than as foods.

Vitamin D has unquestionable value in protecting against tuberculosis and rickets.

Vitamin D is probably stored in the body for longer periods of time than any other vitamin. It is from exposure to the sunshine of the summer months that man absorbs these precious

vitamins which do so much to guard his health during the darker months of the year.

Our knowledge of vitamin *E* came about when it was discovered that laboratory animals, apparently in good health and getting a sufficient quantity of the other known vitamins, failed to produce young. Experiments were made to determine the particular foods that led to this condition and it was found that by supplying these foods the error could be corrected.

The richest source of vitamin *E* was found to be the oil contained in the germ of wheat. Second in importance in this connection is lettuce, the greener leaves containing the greater quantity, and the more highly bleached leaves containing the lesser quantity. Leaf lettuce is richer in vitamin *E* than head lettuce. Lettuce which has been raised under glass in a hot house is practically worthless as far as vitamin content is concerned. Many other grains and green leaves contain vitamin *E*.

The body is capable of storing vitamin *E* to a limited extent.

A living organism may be brought to death by starvation. No one kind of food is sufficient. Living organisms require many different chemical substances in order that they may properly function. Depriving an animal of some particular necessary food element produces in the animal certain symptoms referable to that particular deficiency. Before 1914 it was supposed that the foods necessary for animal life were carbohydrates, proteins, fats and salts.

Various food combinations were figured on a basis of calories and the proper admixture of these elements. It has been found that these elements in themselves do not completely cover the ground as to food requirements, but that certain other elements which exist in foods in rather minute quantities have a more direct effect on health and well-being. Carbohydrates, proteins, fats and salts may all be present in foods, but unless vitamins are also present, death by vitamin starvation will occur.

Deficiency in vitamins lowers the individual's ability to resist infections. Through the ages, the human animal and his ancestors have subsisted on foods that have supplied the necessary resistance against the various types of infections to which he has been exposed. Had this not been the case, the race would have ceased to exist. While the food supply of our primeval ancestors was a "hit or miss" affair it must have supplied the necessary elements for the building of strong, healthy bodies and the development of

a relatively high type of brain. Among savage men at the present time and among animals living under natural conditions, the highest type of physical strength and health is to be found.

The tremendous physical strength of our cousin, the gorilla, represents what our strength might be were we to live a normal natural life. It might be argued that in civilized life such a thing is not necessary, but when we consider that physical strength only typifies a superior ability to align ourselves with natural law and a greater and more intense enjoyment of life, then we must realize that it is a thing very much to be desired and a goal toward which all humanity should aim.

On the other hand, if we are to be satisfied with present conditions—physical weaknesses, degeneration and increased disease incidence—it is plainly to be seen that degeneration, now going on, means the ultimate destruction of the human race.

(Physical Culture.)

Reports of Societies etc.

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DAYANAND AYURVEDIC COLLEG, LAHORE.

Report For 1931-32.

1. Staff.

The staff during the year 1931-32 was as under:—

1. Ayurved Acharya Pt. Surendra Mohan, B. A., Vaidya Vidya Nidhi (Cal), Ayurved Shastri (Decca), Principal and Prof. of Chikitsa, etc.
2. Vaidya Acharya Dr. Asa Nand, M. B. B. S., Vice Principal and Prof. of Anatomy and Surgery.
3. K. Pt. Durga Datt Sharma, A-V., Vaidya Vachaspati, Prof of Nidan.
4. K. Pt. Har Dyal, Vaidya Vachaspati, K. V., M. A. S, Prof. of Pharmacy, etc.
5. K. Pt. Murli Dhar Shastri, Vaidya Vachaspati, Prof. of Chikitsa, Sharir, etc.
6. K. Pt. Vipra Bandhu, M. A. Dharmendu, Prof. of Science and Theology.
7. Dr. Shri Krishna, B. Sc., M. B. B. S., Lecturer on Practical Anatomy.
8. Dr. Shankar Das Ji, B.Sc, M. B. B. S., Hon. lecturer on Clinics.
9. Pt. Bhanu Datt, Vaidya Shastri, Hon. Lecturer on A-V. Clinics.
10. K. Pt. Som Datt, Vaidya Bhushan, Assistant Pharmacy Vaidya.

11. K. Jagdish Chandra, Vaidya Vachaspati, House Physician.
 12. K. Shri Krishan Gosain, Upavaidya.

Pt. Durga Datt, Vaid Vachaspati, Prof. of Nidan, was obliged to leave the College owing to noncompliance of the rules of the Managing Committee. Pt. Murli Dhar Shastri, Vaidya Vachaspati, officiated in his place and worked with great satisfaction. He was substituted by Pt. Parma Nand Dutta, Vaidya Vachaspati, temporarily. Dr. Shankar Das, B.Sc., M. B. B. S., who had been coaching 1 year class in dissection work honorarily for two years, left the work owing to ill health and later on took upon himself coaching the Vachaspati classes in clinics in the Indoor Hospital and did that work during the year with great zeal. In his place, Dr Shri Krishan, B. Sc., M. B. B. S. was appointed to demonstrate Dissection work and gave entire satisfaction to the students by his hardworking and pains taking nature. K. Shanti Swaroop left the work as Upavaidya and was succeeded by K. Shri Krishan Gosain, who had already worked on the same job for two years. Pt. Bhanu Dutta Vaidys Shastri (Multani) offered his honorary services and gave clinical demonstration in the Hospital to 11 year class once a week.

2. *The number of students.*

The number of students on roll for the last three years in different classes was as under :—

	i. year	ii. year	iii. year	iv. year	Total
On 31-3-30	41	49	13	8	111
On 31-3-31	60	39	14	13	126
On 31-3-32	55	62	14	14	145

The above statement shows that the number is gradually increasing in the institution inspite of the course of study having changed into one of 3 years for Vaidya Kaviraj Diploma. Of all the students in the college, there were 7 Shastris, one graduate, 5 undergraduates and the rest Matriculates, Visharadas, Pragyas and other Sanskrit title-holders, the minimum qualification for admission being Matriculation with Sanskrit, Pragma of the Punjab University or Prathma of U. P.

3. *Examinations.*

There are two examinations, held every year in April, Namely (1) Vaidya Kaviraj-2 years' course and (2) Vaidya Vachaspati-4 years' course. The result of the annual examination, held in April, 1931 was as under :—

	Total	Passed	Und. Comptt.	Plucked
(1) Vaidya Kaviraj—	43	29	3	11
(1) Vaidya Vachaspati—	14	12	1	1

The course of studies for Vaidya Kaviraj Diploma has been changed to 3 years instead of two years and the students, who were admitted in the 1 year class in 1931, have to follow the new curriculum and on the completion of their course will be better and abler Kavirajes than those of the old scheme.

4. *Hospital and Dispensaries.*

For the training of students in diagnosis and treatment, this college maintains one Indoor Hospital and two charitable dispensaries, one situated in the college premises and the other in Kucha Gosaian (Sutar Mandi). In all these depts., students of II, III, and IV year classes work in groups and learn clinical methods of Ayurvedic treatment under the guidance of their staff. Learned discourses are delivered by the principal and other professors on cases in the Hospital to acquaint the students with the pathology and therapeutics of diseases.

The number of cases admitted in the Indoor Hospital during the last three years is given below :—

Years	Total admissions	Cured	Discharged otherwise	Died
1-4-29 to 31-3-30	252	204	40	8
1-4-30 to 31-3-31	314	278	29	7
1-4-31 to 31-3-32	361	324	32	5

The Hospital is becoming popular and attracting patients from far off localities for Ayurvedic treatment, as it is the unique Hospital of its type. It is situated in a very healthy place. The number of females and children, admitted in the Hospital, is very low. It can be increased and females can be benefited by A-V. treatment, if the Committee appoints a nurse to serve and manipulate them. Request was made to appoint a nurse, but it was rejected by the Committee owing to the want of funds. The Hospital needed a kitchen badly, but the need has been met with by a kind donation of Rs. 300/- of Pt. Thakar Dutta Vaidya Multani. We still stand in need of cubicals for paying patients.

The surgical operations performed by Dr. Asa Nand, M. B. B. S., and the House Physician during the last year numbered 22, out of which 5 were major and the rest minor. This requires improvement.

The out-patients, attending our outdoor dispensaries for the last two years, numbered as below :—

(1) *Dispensary Attached to the Hospital.*

Year	Old Patients	New Patients	Total.
1-4-30 to 31-3-31	5485	7836	13321
1-4-31 to 31-3-32	7972	10140	18112
Increase—	2487	2304	4791

Increase of 4791 patients in one year reflects upon the popularity of this dispensary in the college premises. It is indeed doing a useful service to the growing population in the vicinity of A. V. College, viz. Krishna Nagar, Ram Nagar, Sant Nagar, etc.

(2) *Sutar Mandi Dispensary.*

Year	Old Patients	New Patients	Total
1-4-30 to 31-3-31	10518	7490	18008
1-4-31 to 31-3-32	11531	7620	19151
Increase—	1013	130	1143

This dispensary is not progressing as it was expected, probably owing to its being situated in the far-off corner of a lane, Kucha Gosaian, and to some other unknown causes. The Committee is realising the situation and is taking necessary steps to improve it.

5. *Pharmacy.*

This is the most well-equipped and useful department of A. V. College. Its preparations are being used by millions of people every year. It affords an ample opportunity to students to prepare a large variety of medicines of different types. The practical training in Pharmacy helps the students very much in their after-life of medical practice.

The rooms of the pharmacy Deptt. need a decent veranda in their front to protect the building and workers against rain and scorching heat in summer. In fact there is no place for the students to sit and prepare medicines. Funds for the construction of veranda have been collected and it will now be erected shortly. Stores of raw materials have increased enormously and a separate room for them was badly needed. Our thanks are due to L. Dharam Chand Ji, who has offered to construct at his cost a room for Banaspati Bhandar in memory of his late-lamented father, L. Kedar Nath, Contractor, Model Town. Plans have been approved of by the Managing Committee and construction will be taken in hand shortly by the donor.

Out of the current income of Pharmacy, three servants' quarters have been built last year at a cost of Rs. 1000 to accommodate the menial staff of the college, which was so far in a great trouble on account of want of proper abode.

Two grinding machines (End-on-runners) and a motor have been added to the machinery of the Pharmacy at a cost of Rs. 500. Their addition has very much facilitated our work of grinding and preparing Bhasmas or oxides of metals. We still need machines for pulverising hard substances, such as nux vomica, sifting powders and pressing oil seeds.

6. *Dissection Work*

R. B. Dr. Beli Ram's memorial, namely Dissection Block, has greatly added to the efficiency of the institution. Students—our future Vaidyas—swarm with great zeal around dead bodies, dissect them and thus gain practical knowledge of anatomy in the real sense. Last year we got only 3 bodies for dissection work. The Government has made arrangements with the Medical School, Amritsar, for the supply of dead bodies and the Principal of the School has agreed to it on payment of Rs. 20 per body. It would have been better, if any local arrangement had been made. Transport charges of dead bodies from Amritsar to Lahore are also very heavy.

The Dissection Block needed a cold storey for the preservation of corpses. The expenditure is estimated to be Rs. 8000. The Managing Committee should raise funds for this purpose to meet this long-felt need.

7. *Hostel.*

There is no proper hostel of this college. Two wards of the Hospital are being used as Boarding House and were last year occupied by 32 boarders, 16 in each room against 12 seats for indoor patients, but some students left and the number came down to 26. A separate hostel for 50 or 60 boarders is a great necessity of this institution. The Committee should realise this drawback and make arrangements for a big hostel as early as possible.

8. *Library and Reading Room.*

Practically speaking there is no library or reading room on days when it is not needed for practical work. There are about 30 newspapers,—daily, weekly and monthly, mostly on Ayurved, that we receive from different parts of India usually in exchange of our bi-monthly magazine—Ayurveda sandesh. Library consists of 3 almirahas, lying in the Principal's office and containing about 500 books on Ayurveda, Allopathy, Unani, Theology, etc. Every year a number of new books is added to the library.

R. B. L. Sewak Ramji, M.L.C., Bar-at-Law, who presided last year in October, 1931 over A. V. College anniversary, has very kindly promised to construct a room for Library, adjacent to the Principal's office. The Managing Committee have accepted and passed the plans of the room.

9. *Excursion to Hills.*

About 80 students of II and IV year classes, accompanied by their Principal and Professor of Materia Medica, went to Mussoorie Hills and saw on the way plants at Hardwar, Rishi Kesh, Nil Kanth, Dol Wala, Dera Dun, etc. The tour was long and tedious. It extended over a period of 15 days. On the way back, the party saw the Government

Botanical Gardens at Saharanpur and some plants of dry forests at Kuru Kshetra. Each student spent about Rs. 20 on the average, including Ry. fare, saw and collected samples of about 100 different plants of great interest. They were exhibited to the visitors at the last college anniversary. Excursion to hills have proved very useful to the students of Ayurveda, as it gives them practical knowledge of morphology and identification of vegetable kingdoms, which is the life of Ayurvedic treatment.

10. *Social Services.*

It is a matter of great pride to assert that the college does not lag behind, when the country needs its services. A few years back, students of senior classes were sent to serve and treat the sufferers of Malaria-stricken districts, Multan, Muzaffar Garh, Hissar etc., run-down by floods. Very recently a batch of student-workers was sent to Kashmir to treat the unlucky, homeless people, who suffered heavy losses of life and money on account of riots and mutiny, and fell prey to disastrous maladies, as Dysentery, Diarrhoea, Pneumonia, Pleurisy, fevers of different types, etc., which usually catch hold of persons starved and exposed to vicissitudes of nature and calamity. Arya Pradesak Pratinidhi Sabha, Lahore, opened relief centres at Bhimber, Kotli, Mir Pur, Punch, etc., under the able guidance of Mahatma Hans Rajji. Our students went to these places walking long distances through jungles at the risk of their life and treated thousands of people, thus winning a name for Ayurveda, A. V. College and D. A. V. Society, so much so that the inhabitants of these places, including state officers, presented addresses and medals to the students for their admirable and self-less services.

11. *Miscellaneous.*

The Dayanand Ayurvedic College, Lahore, with magnificent buildings for class-rooms, Pharmacy, Hospital, Anatomical Department, Dispensary etc., costing over two lakhs of rupees, is doing a useful service for the revival of Ayurveda, the most ancient system of medicine in the world. Bulk of students come from the Punjab, but not less than one fourth of the total number of A. V. College students belongs to U. P., C. P., Gujrat, and other provinces. This institution lays a great stress on practicals, as dissection, clinics, surgery, science, botany, pharmacy, etc. and this is why so large a number of students is being attracted to join this technical institution every year. Young men who receive training and get diploma from this college find a great scope of work in urban as well as rural population. Though there are a very few jobs or services open to them in states, district and Municipal boards, or charitable societies, yet Vaidas do not starve. They get work among masses and consequently their livelihood at any place. They settle down with a firm mind, but our

Punjab Government should very kindly follow the foot-prints of U. P., and Behar and Madras Governments and take necessary steps to patronise and encourage the A. V. and Unani systems of medicine by opening charitable dispensaries of these systems and appointing qualified Vaid and Hakims in them and giving grants to them to assist them in their private practice. The same is being done in all other provinces.

12. *Funds.*

This institution needs a large amount of money for starting research work on A. V. lines, pathological laboratory, a dental department, a female college and hospital, etc. Even the present work of the college is being managed with great difficulty with the help of philanthropic persons. Capital fund and grants are very inadequate. Rs. 3000, received from the Punjab Government as grant-in-aid, is being utilised on the Indoor Hospital for training the students in A. V. medicine. Lahore Municipality grant of Rs 500 is spent on the city dispensary. The rest of the expenditure of Hospital and Dispensary is met with out of sale proceeds of the Pharmacy Department and by begging alms. The grant of Rs. 2300 of Punjab University goes partly to the pay of the Head Lecturer and partly to A. V. Medicines. Grants-in-aid should be increased, if these bodies (The Punjab Government, University, and Municipality) want to patronise and popularise Ayurveda in the Punjab.

REPORT OF THE FIRST ANNIVERSARY OF THE ANDHRA AYURVEDA VISVA VIDYALAYA COLLEGE.

The first anniversary of the above college was celebrated on 3-4-1932 in the Pydah Town Hall with the famous Lawyer Doctor, Peddi Chotla Subbarayudu Garu, M. B., B. L., F. T. S., presiding over the crowded assembly including the local literary and scientific associations, members of the academic council and staff of the P. L. first grade College and the Training College and High Schools and elite public of the City.

REPORT OF THE COLLEGE WORK.

GENTLEMEN,

This college was started on 7-2-1931 and the function was performed by Dewan Bahadur, M. R. Ry. D. Seshagiri Rao Pantulu Garu, B. A., B. L., advocate, our patron, and we have since covered one year of our work.

Our one idea from the beginning is to work the college on a residential system on the line of the ancient Guru Kula. But the difficulty was in procuring a fitting set of students and teachers and accommodation. The

Gurukula demands a correct aptitude in the student for Ayurvedic study. Vide Kausika sootra—embodied in Sushruta also :—

“ब्रह्मचरित्यवैश्यानां अन्यतमं अन्वयशीलशैथिल्यौचाचारविनयशक्तिबलमेधाधृतिस्मृतिमतिप्रतिपत्ति-
युक्ततनुजिह्वीठदन्ताग्रमृजुवक्त्रादिनासं प्रसन्नचित्तवाक्चेष्टाक्लेशसहं च भिषक्शिष्यमुपनयेत् नतो
विपरोतगुणं नोपनयेत् ।

Then the method of teaching is all the more rigorous. Vide Kausika sootra again.

तयाणां द्विजवर्णानां ब्राह्मणास्य चरित्यस्य वैश्यस्य चोपनयनं कर्तुमर्हन्ति उपनीतस्तु यः शिष्यः
स प्रणवभिः अर्हन्त्याहूतिभिस्ततः प्रतिदैवतमृषिभ्यः स्वहाकारं च कारयित्वा अग्निमुपसमाधाय
मन्त्रोक्तविधिना आयुर्वेदमध्यापयेत् ॥

This discipline was perhaps with a probuddhist impulse relaxed to some extent by Charaka and completely relaxed later by Sushruta. Please see Sushruta :—

शूद्रमपि कुलगुणसंपन्नं सन्त्ववर्जमनुपनीतमायुर्वेदमध्यापयेत् ।

Thus it is clear that these two acharyas started the new school of Amantraka Ayurveda, which is unavoidably different from the Vedic Ayurveda. Their manuals, therefore, are meant for the lower courses or what I may safely call minor courses in Ayurveda and, as they are designed to be taught Amantraka or unscientifically and non-methodically, they are incomplete, unpractical and perhaps unscientific, when compared with the Vedic Ayurveda embodied in the Bharadwaja, Kausika, and other sootras.

Whether, wholly or partly, these books being unscientific, it is no use keeping them as text books for a scientific study and a complete course of Ayurveda. Ayurveda will be scientific, only when are methodically studied the theory from the Vedas, Vedangas, Puranas, and practice from Original Karma sootras, as Ayurveda was a compilation from all the four Vedas and appended to the Atharvaveda. Vide Brahma Vaivarta purana :—

भग्यजुस्सामाथर्वाख्यान् दृष्ट्वा वेदात् प्रजापतिः विचिन्त्य तेषामर्थं चैवायुर्वेदं चकार सः ।

Again,

चतुर्णांभग्यजुस्सामाथर्ववेदानामात्मनोऽस्यायुर्वेदस्याथर्ववेदे विशिष्येकोक्तिः ।

We have all the Vedas, Itihasas, Puranas, sootras and a mass of other primitive literature still preserved intact and most of them are printed also. We may say that the old scientific Ayurveda is not lost to us. Now that the modern sciences are sufficiently advanced to take us within the reach of Vedic truths, we are confident of correctly interpreting every Ayurvedic truth in terms of modern science, by a correct and consistent application of the three keys, Nirukta, Chandas, and Vyakarana, and lubricating the cog-wheels occasionally with

Mimamsa and Tarka when the machine does not slide easily. This way, then, we hope to supplant the lofty flag of Ayurveda with the insignia of the invincible Makara on it, on perfectly scientific and therefore adamant foundations indestructible for ever.

In our Text books, we preserve the primitive Vedic and Sootric nomenclature throughout, with the corresponding Latin nomenclature of Allopathy and allied sciences alongside and work up the body of the book in simple vernacular. Our student, then, will be conversant with all the versions of a truth and may, therefore, correspond correctly with both the East and the West.

Our aim, in the ultimate, being one with the Andhra University, *i.e.* in vernacularising all sciences and bringing the Vedic science into the language of modern sciences, we hope that the Andhra University may thankfully adopt our Text books, when they open the Faculty of Ayurveda, which I learn, they are already on the way to.

COURSES OF STUDY.

The subjects are grouped under three main heads. 1. Pre-medical, 2. Medical and 3. Post-medical. In the first group will be included Anatomy, Physiology, Chemistry, Physics, Botany, Zoology, Bacteriology, Pathology, Therapeutics and Practice of medicine, Surgery and Midwifery. The Post-Medical subjects will be reserved for Bhoota Vidya or Psycho-physical diseases, Gynaecology or Vandhya Tantra, Vajikarana or Rejuvenation, Pumsavana or Sexmetamorphosis, special senses and Krichha and Krichhaparihara or electro and Odic therapy.

We hope to complete the curriculum of the pre-medical subjects in three years and the medical subjects in two years and graduate the student in five years in all and it will be left to him to take up or not the post-graduate study, the time for which will be fixed according to the subject or subjects selected.

Our Text books will be prepared in progression with the regular College work. We have since done a large part of Physiology, Anatomy Chemistry, Physics, Hygiene and Materia Medica of the pre-medical courses and the Pathology and Practice of medicine of the medical subjects.

I will now give you the outlines of each subject, so far handled, and, if you so permit, also read out a few select paragraphs, so that you may be well impressed of the scientific and comparative nature and the utility of the books.

I shall take the subject of Indian Chemistry in the first instance. The Ayurvedists studied this subject under two heads, the Organic and Inorganic, as we now do. In Organic Chemistry, it was the Ayurvedists who originally demonstrated the fact that the essential compound of

plant and animal structures and their molecular composition may be very complex, but includes only five elements, (1) Prithvi-carbon, (2) Aap (Aqua), Hydrogen, (3) Anala-oxygen, (4) Anila-Vayu, Nitrogen and (5) Akasa-Space. Ordinarily, space or Akasa is left out of count as it is all pervading and non-cognizable.

पञ्चभूतात्मकं शरीरं आसन्निधाय जायते, अस्वयैन्मयिभूतं समवायतः तन्निवृत्तिविशेषश्च व्यपदेशस्तु भूयसा । तव अन्तरिक्षं तु अवयवरूपप्रमाणादिरहितम् । तस्माद्भूतैः चतुर्भिः सहितैः सुक्ष्मैः मनोजवो देहमुपैति, देहात्मकत्वात् न तु दृश्यं दिव्यं विना ।

Carbon is the primary constituent of all organic bodies, whether animal or vegetable. In animal matter, however, an additional sixth element, Sulphur, gets in without which organic matter cannot get organised into serum albumen.

गर्भस्तु खल्वन्तरिक्षं वायुमितीयभूमिविकारः चेतनाधिष्ठानभूतविकारसमुदायात्मको गर्भः चेतनधात्वधिष्ठानभूतः स ह्यस्य षष्ठी धातुक्तः ।

Further as these different bhootas or elements possess different valances, Hydrogen being monovalent, Oxygen bivalent, Nitrogen trivalent, and carbon quadrivalent, the variety of compounds and the three states solid, liquid, and gaseous arise. Vide :—

जन्मसंरणकरणानां प्रतिनियमाद्युपपत्त्यत्रैव पुरुष बहुलं सिद्धम् । सरावतैर्गुणविपर्ययः ।

This organic synthesis is called in Ayurveda Bhoota Panchikaranam and the organic analysis is called Bhoota Vikarini. In Sastric language synthesis is called *Chandas* and analysis *Vyakarana*.

The properties of organic compounds are intermediate to the elements entering into their composition and no compound is as hard as carbon and as gaseous as the air.

Organic substances are classified into ten main groups. (1) आद्य Kshmapya—hydrocarbons, (2) मद्य Madya—Alcohols, (3) मरुत् Marut—Ethers, (4) आग्नेय Agneya—Carbohydrates, (5) वायव्य Vayavya—proteids, (6) धातुक्त Dhatukrit—Albuminous, (7) अम्ल Amla—acids, (8) चार Kshara—Alkalies, (9) मारुत Maruta—Esters and (10) मारक Maraka—Ketones—precisely corresponding to the divisions of modern science.

Chemical formula and equations also are correctly framed and represented using the followings symbols :—(1) बीज—शब्द Beeja or Sabda for element, (2) Laghu for monovalence, (3) Guru for bivalence, (3) Deergha for trivalence, (4) Pluta for quadrivalence, (5) Pada, Gana or Pratipadika for radicals. The formula Yoga is represented in more ways than one in the styles of (1) Gramya—emperic, (2) Granthica or Grantha—classic, (3) Chandasa—rational, and (4) Chitra or graphic methods. In the graphic method, again, we have Vivritta vritta—open chains and (2) Samvritta bandha—closed rings, in the same way as we now have.

In the Indian chemistry you will also find a mention of the Ruparopantaratwam—Allotropism, Prabhava or Pratyarabdha prabhava—Isomerism, which later is divided into (1) Samana pratyarabdha-prabhava, metamerism and (2) Vichitra pratyarabdha prabhava—polymerism. Vide :—

वस्तुनां यस्य संज्ञायाः प्रकृतीकरणेऽमृतः त्वत्त्वादिविध्यस्य प्रभावतः । रसादिसाम्ये यत्कर्मविशिष्टं तत्प्रभावजः इति सामान्यतः ।

Substances are metameric when their molecules contain equal number of atoms of the same elements and have the same composition but present different properties. Example :—

दन्ती रसादैस्तुल्यापि चिवकस्य विरेचने, मधूकस्य च स्रद्धिका ।

Sugars of the grape and Madhuka, Glycerrhiza, have different properties in the same way as the cane-sugar and milk-sugar. C-12, H-22, O-11 vary in action.

Again, (Vide द्रव्यानां पुनश्च तत् विचित्रद्रव्यरेदेन भिद्यते) substances are polymeric when they have the same centismal composition, but different molecular weights.

Example : स्नादुर्गुरुगोधूमी वातजिज्ञातकृत् यवः ।

Barley and wheat possess the same centismal composition but, as they have different molecular weight, act differently, barley being a diuretic while wheat is anti-diuretic.

INORGANIC CHEMISTRY.

Turning to inorganic chemistry, the Ayurvedists studied all substances under two heads: Dhātu, metals and Upadhātu, nonmentals and again as Rasa and Uparasa according as they are nervines and tonics. The atomic and molecular weights of all metals, Anugarima and Kanagarima, were studied in addition to their valences and specific gravity, nirdistagarima.

The radicals getting into chemical composition are differentiated as Amla and Kshara, acid and basic radicals, and substitution and displacement. Pratyamnayam was practised.

The salts are studied according to their prabhava, Swad, Amla, Kshara, as they are neutral, acid, or basic salts in the same way as you now do, and again as they possess *neunadhika trana*, corrective properties.

Details of compounds as sulphites, sulphates, sulphides, hydroxides, are all given with their varying therapeutic indications. For example : Rasa bhasma and Karpur, mercurious chloride and mercuric chloride.

The process of destructive distillation, as different from oxidation, Agnidagdha and Anagnidagdha, with actual results are recorded, and the phenomenon of decomposition and derivation products is fully studied—Dravya vikarani and Dravya janyata.

The process of sublimation and preparation or *stvapathana* and *marana* are clearly recorded with regard not only to sulphur and creta but also to mica and many other minerals.

In the matter of reduction of metals, the Ayurvedists did not stop with reducing a metal like bismuth into its colloidal state, *Nischandrica*, but went to the length of dializing or oximosing every metal, *Varithara* while the modern chemist has brought into use only one-dialized iron. You all fully realize that a metal is best absorbed in the body when dialized and it can be introduced into the body by mere inunction. Colloids have to be dialized in order to stabilize them.

Metallic compounds are rendered stable, *apunarbhava*, through a specific process and the stability proved and verified before storage.

INDIAN PHYSICS

In Physics, the Forces of universal attraction, Gravitation, capillary attraction, adhesion, cohesion or *pranayana*, etc. were all studied with reference to the two kinds of energy, as *Sthira*, the Potential and *Chara*, the Kinetic. The phenomenon of *Vajrikarana*, crystallization, and the varieties of crystals and their *Jalotvamana* or giving up of water of crystallization and *Jalakirshana*, deliquescence, are all explained.

The sections on sound, heat, light and electricity were fully dealt with. The analysis of the Solar spectrum into *Santa-aswa*, *vihgyor*, and the *sapta-jihwa*, seven zones of flame, and the *Sapta-archi*, seven kinds of rays, the (1) Thermic ray, (2) Electric ray, (3) X-ray, (4) Chemical ray, (5) Phosphorent ray or cold ray, (6) Thought or magnetic ray, and (7) the volcanic ray or *pralaya*, according to their vibrations and application to the medical science are all very interesting. It was the Hindus who originally demonstrated the branches of Heliotherapy and Electrotherapy and Chromo-therapy, all of which the Allopathic medicine has just commenced to appropriate.

The Ayurvedist's studies in Electricity are singular and the process of generation, accumulation and projection or induction of electric currents is absolutely safe and simple. The process of *snehadravana* or solution of fats and resins in water; for example, *panchamrita* and *tulasiteertha*, by electrolysis is remarkable. Polarization and depolarization, *Prokshana* and *Samprokshana*, are studied with full details. The Hindu method of producing electricity with the help of *Salagrama*, *Sphatika* and *Rasa-linga* is still unknown to the West. I will not tax you with more details at present, as by now, you are fully impressed of the high scientific nature of Ayurvedic study. I will pass on to Physiology and Anatomy, where I have a number of revelations to present.

Charaka, no doubt, fully endorsed Physiology and Anatomy as fundamental to Ayurvedic study. Vide —

शरीरविषयः शरीरपकारमिष्यते । भिषग्विद्येयम् ज्ञातेहिशरीरतत्त्वे शरीरपकारिषु भाविषु
ज्ञानमुत्पद्यते

Why ? he verily identifies Physiology with Ayurveda. But, unfortunately, it now occurs that Ayurveda is being studied and practised without even the rudimentary knowledge of this branch, for which very reason, the present Ayurvedist is discarded. I will now show you that the fault does not lie in the system, but in the method of its study only.

In Ayurveda, Physiology is studied in five parts or cantos, the body being divided into five kosas or systems. They are 1. the Annamaya—the alimentary circulatory system with its three sub heads pachaka—digestive, prasaraka—circulatory, and mochaka—excretory systems, 2. Pranamaya—the respiratory system, 3. Manomaya—cerebro-spinal system with its sub-heads, manas, buddhi, chitta, ahankara, 4. Vijnanamaya—the gangleonic system with its three divisions, Id—sympathetic, Pingala—Para-sympathetic, and Sushumna—the intravertebral ganglionic chains, and lastly 5. Anandamaya—the procreative system corresponding to the Genito-urinary system of modern Physiology. Osteology and Myology do not concern so much with Physiology as they do with anatomy, and they are studied as they are involved in the circulatory and nervous systems along with Splanchnology.

In the Annamaya kosa, the whole process of digestion and blood formation will be studied with the corresponding Biochemistry of ferments and enzymes and pachaka Rich and pachaka Ruch (and their vipaka biochemistry) and putrefaction, Kledana and Rodana toxaemia will be studied with correct details. In the Prasaraka Khanda will be studied the chemistry of blood and its circulation and its pathology with reference to tridosha, explaining the analogy of the whole stethoscopic, sphygmographic and cardiographic reading and finding. In the Mochaka Khanda will be included the whole excretory system, with reference to the internal and external secretions of all the secretory glands and their hormones.

The Pranamaya kosa includes the lungs, their coverings and passages which will be studied with close analogy of stethoscopic and fluroscopic readings and findings with reference to sawasa, kasa, urakshata and Kapha-Krimi.

The Anandamaya Kosa deals with the whole genital system with both the primary and secondary sex organs, internal and external, being studied from their very genesis in the foetus अजौहृदिष्टा च कामः, right up to their atrophy and disfunction, menopause in the woman and Vana-prastha in the man. Malformations and disfunctions of all types and stages are included in this kosa and the subject of sex adaptation is anthropometrically studied with the result that many major gynæcological conditions and disorders could be traced to mismatching and corrected by a change. The subject of Hermaphroditism and other congenital

defects were elaborately studied, and a whole volume of Vajeekarana was prepared with over eighty four postural manoeuvres, all designed to secure sex adaptation in cases of mismatches. The subject of impotence and sterility was fully studied in all its fourteen phases and the Thymo-Thyroido Gonad interrelation was fully studied with the crowning success of the Putra Kama Isti involving testicular grafting and thyroid transplantation. All these items will be included in the Anandamaya Kosa.

The nervous system will be studied under two heads, the Manomaya Kosa, the central nervous system, and Vijñanamaya kosa, the Ganglionic system. In the former will be included the Sahasrara, the Manasachakras and the Swargaloka Devatas within the respective jurisdictions of the Brahma, Vishnu and Maheswar, or the faculties and centres, both sensory and motor. In the latter, will be included the Sñat Chakra or the Major Gangliated plexuses and Nakshatra or minor Ganglia with reference to Ida, Pingala and Sushumna. In these systems will be studied the whole of Bhootavidya dealing with not only the general and partial paralyses, but also perversions, as insanity, melancholia, hypochondriasis, neurasthenia, even criminal and suicidal tendencies and their treatments or prayaschitta—repair of brain, and Deeksha or restricted life and diet and re-education and suggestive therapy.

Along with the Vijñanamaya kosa will be taught the whole of Swara Sastra or the science of Phonetics developed from the Rigveda. This will appear to you as a new system of diagnosis as yet untraversed by the allopaths but it was one of the best diagnostic procedures in the realm of Ayurveda. The origin of this system you find in the Rigveda.

स्वरिवक्त्रमिता पदाति । तानि विदुर्ब्राह्मणा मनीषिणः । गुहानि तेषां निहितानि ज्ञयन्ति ।
सुरीयं वाचो मनुष्या वदन्ति ।

The phonetic science deals not only with the audible sounds and voices but also with vocal fremitus or inaudible voice caused by the vibration of the vocal cords. For example, the stammered and muttered sounds are ordinarily indistinct and unintelligible. Again during the nightmare of the sleep, we ball out and cry, all of which is buried in the body only and is not heard out. These are all voices which are studied under vocal fremitus. This study involves a separate surface anatomy with the help of which a topical diagnosis of not only every nervous and bodily disease but also a number of psychophysical diseases are diagnosed and treated. Vide :—

म ॥ आ ॥ सूत्रम्

आयुर्वेदज्ञानं न च वज्रज्ञानपूर्वकम्

आदिस्नानवर्णाधारकाङ्क्षपक्षं पादायाङ्गादिष्ठितं वर्णोच्चारणप्रयत्नप्रेरिताङ्गज्ञापकवर्णज्ञानविषयिकं
तालोल्लुपटव्यापारजातपवनप्रेरिताङ्गज्ञापकवर्णज्ञानविषयिकं तालोल्लुपटव्यापारजातपवनप्रेरिताङ्गज्ञापकवर्णज्ञानविषयिकं
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ज्ञानभेदकार्यं विचित्रहेतुप्रतिपादकं सामग्रीजन्यं कारणस्य क्रियाविशेषवैलक्षण्यज्ञातया विचित्रवर्णं ज्ञापक-
त्वमनुभूयते । सोऽनुभवः सामग्रीभेदाद्भवतीति । देशतः कालतः घटनारूपं विशेषतः सिरादि
बाह्ययोगात् हीनात्यन्तरीचरितं स्वराद्वर्णभेदज्ञानं तस्मात्सामग्रीभेदाद्भवतीति । श्रोत्राकाशस्य
सामीप्यभेदभेदजातमहिम्ना उच्यते तरोच्यतमोच्चारणभेदात् तत्तद्वर्णात्मकशब्दभेदो ज्ञाप्यते ।
शब्दभेदबोधकवाक्यं सिराभेदोद्भववर्णबोधककणं भवति ।

यदि विरुद्धरसद्वान्याताजीर्णादनिलोऽजीर्णः । तेन यद्वर्णकलादीर्वैलक्ष्येन तदवस्थितवर्णदोषः
गमनागमनमार्गनिरोधात् पवनादिषु विकारश्च प्रदृश्यते । तव तत्तद्वर्णोपादकस्थलिषु तत्तद्वेतुभूतरोगाः
प्राप्नुवन्ति । तथा सति यत्तदुद्बोधकं रसादनानुसारेण विरुद्धबोधकत्वं विवर्णं ज्ञापकत्वं अवलम्ब्य
स्वरहीनत्वं तत्तद्वर्णेषु पलभ्यते । तत्तद्वर्णभेदात् सिरा विज्ञाय तत् स्थानगतवर्णविरुद्धं वर्णमिति
तद्वर्णजनकसिरास्थितिं विज्ञाय दोषधातुगत्यासृज्ज्विकारो घटदृश्यते तव दुष्टाशयं विज्ञाय
तत्तद्वेतुकसिराजालं च विज्ञाय तद्वेतुकतामयस्थलं विज्ञाय तत्तद्वस्वरादोषवर्णात्मकतरं निज्ञायपि
विज्ञाय तत्तद्वीरगतिवर्णार्थं तत्सिरागतदुष्टरसासृज्ज्विमोचनमेव चरितार्थत्वात् सिराविशिष्टवर्णविधि
शस्त्रवाराग्रिकर्म च तदामयं निवारणम् । तदेवैषधिदानं जपहोमसुरार्चनैरपि ।

श्रोत्रेन्द्रियग्राहकशब्दप्रयोगजनितज्ञानं चक्षुर्गृह्णति लेखिकज्ञानवत्प्रमाणम् । निर्दोषश्रोत्रं
निर्दोषचक्षुश्च समजनकाभावात् ।

This anatomy is as follows. On the body are marked out the twenty seven Nakshatras or constellations, identifying each with a ganglion in the Ida or sympathetic and again in the Pingala or Parasympathetic chain, designated by the fifty four letters of the alphabet. To complete this representation, the original *Akshamala* of Sanskrit alphabet had to be enlarged into *Aksharamala* adding the short vowels of *a* and *o* and the hard letters of *l* and *r*. The topography of each letter or ganglion is then graphically described in relation to the regional nerves, arteries, lymphatics, and veins and the letters are grouped into Vargas according as the nerve plexuses around them. And what is more striking is that the involvement of the nervous systems is so elaborately studied that every aphonia is literally traced to a disfunction in its corresponding ganglion and plexus. Here, the reflex action of the nerves and their centres was so clearly and lucidly explained, that a complete system of phonetic diagnosis was developed, so easy of practice and so dependable in actual clinical work. Then, after identifying a distant and faulty centre as the cause of an aphonia, one of the following procedures is prescribed as a means of cure :—(1) *Siraveda*—puncture of a vein or the spine, (2) *Salyavidhi*—aspiration, (3) *Sastravidhi*—incision or excision, (4) *Kshara vidhi*—Irritation or counter irritation, (5) *Agni vidhi*—branding and electro and thermo cautery. In this *pancha karma* will be included ligature of arteries with a view to create anastomoses or short circuit in cases of aneurism, and venisection and removal of thrombosis, section and stretching of nerves in sciatica and other neuralgias, and

The phonetic diagnosis was not limited to men only, but was utilized in the veterinary practice also. Vide :—

We cannot lose sight of the fact that with the help of this system of phonetic diagnosis only, the aphonia of the hard letter *R* of King Bhoja was traced to the diseased condition of Gassarian ganglion and it was cured by its excission and removal. Vide :—

Coming to the subject of treatment, you will see that quite a variety of methods are employed in Ayurveda, each covering over a range of Allopathic medication and that all means we simultaneously employed, so that the disease is sought on all sides and its cure is hastened. Vide :—

I shall illustrate this by applying the phonetic diagnosis and the treatment of Gout by taking the first letter *a* from the primitive Ayurveda and interpret it into the modern scientific language.

अथनो ज्वरः । अथनीनक्षत्रविरुद्धगतिहेतुग्रहयुक्ततत्त्वान्नानुगतरसाग्रीणं जन्त्यापित्तविषक्रिस्त्रि-
 विकारकज्वराः प्रदृश्यन्ते ।

श्रीप्रधिदानजपहोमदेवतार्चनं निवर्तकम् ।

अश्वनीदेवतार्चनं तत्रभेषजं ।

Here you see that Gout is traced through the aponia of the Hrasva Anudatta vowel 'a' to its origin in the great toe and is followed in all their joints by extension or migration and rotation. The aetiology is traced to amapitta ajeerna or defective oxidation and retention of purin bodies in the diet and consequent accumulation of Uric acid deposits. The disease being closely associated to Rheumatism, the bacteria—vishakrimi—micrococcus rheumaticus and the streptococcus, are included in the

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associate causes. In the treatment, attention is drawn to the necessity of elimination through all the channels of the deposits in the synovial and articular membranes and sacs—*Avarna jnapāka Yuvith sira nala avritama rasa nivarta koushadhyah tannivartakam*

Then to accomplish a cure, are indicated (1) Oushadha or medication including (1) Astrayoga—injections, (2) Dana or restriction of diet (salt is asked to be given up or sacrificed), (3) Japa or postural treatment—Japa includes Asana (sthiraśirkhamasanam) to favour drainage, Kapala asana or the raising of the foot and the lowering of the head of bed or mattress is indicated, (kapala asana is prescribed to favour drainage, absorption and elimination of fat and fluid from the region below the navel), (4) Homa or fumigation including hot air baths, vapour baths; and lastly (5) Devatarchana, meaning electrotherapy or ionic treatment.

Devatarchana in our homes, you know, means and includes panchayatana of the five moorties, Aditya, Ambika, Vishnu, Ganananda and Maheswara or the harmonious synchronisation of the different thermal, chemical, and actinic rays. Aditya means the Sun and represents the vermilion-colored thermic ray of the sun; Ambika means Parvati and represents the yellow colored chemical ray, Vishnu represents the Saligrama and stands for the blue or electro positive ray, Ganeswara represents the red electro negative ray and Maheswara or Sphatika represents the white or ultra-violet actinic ray, as borne out by the respective colours of the natural stones selected to form the moorti Panchayatana.

In the modern laboratory, these rays are estimated to possess different vibratory count ranging between 25 to 50 per second and in the Vedic language, the different counts are denominated by the names of different dieties. In this case, the diety is Aswini devata or the Jheekshana Mayookha of the Sun or thermal ray; in other words an antiphlogestic ionic medication.

Further, these stars are all connected with and are governed each by a principal centre in the brain called *Adi Devata* and by a secondary centre in the spine called *Pratyadi devata*, both of which are asked to be invoked or stimulated so that both nervous systems might co-operate to hasten the elimination. This stimulation or *surarchana* is specially resorted to in all cases where the exudate cannot be aspirated or drained, being very deep seated and impossible to reach as in the case of hydrocephalus and serous endocarditis. Vide :—

याः सिराः यमशियगाः ताः न वेद्याः ।

This is the rationale of the employment of the Vedic panchakarma in the treatment of diseases. But in the emperic Ayurveda, now availing in the country, these methods are given up and five secondary methods in the name of the same Panchakarma, (1) Vamana—emesis;

(2) Virachana—purgation, (3) Swedana—diaphoresis, (4) Sneha—ointment or innunction of a liniment and (5) Vasti—enema or flushing of the colon and bladder and introduction of rectal suppositories, are practised.

This College text-books will include all the major and minor panchakarma and will therefore be quite up to date.

Gentlemen, it will take me too long to narrate to you the synopsis of the text books on the remaining subjects. I shall place them before you on another occasion and in the meanwhile keep them available for perusal in the Visva Vidyalyaya Office.

You have since realized that we have undertaken too heavy a task and having so far demonstrated the utility of this scheme, I crave your sympathetic co-operation and support. We shall be certainly encouraged by your appreciation of the work and advice for improvement.

Gentlemen, I and this institution are wholly thankful to you for the patient audience and participation in to day's proceedings. I invoke the Lord Dhanvantari to bless you all with good health and long life.

We have since completed one year's course with the first batch. We shall admit the 2nd batch in June. We have also arranged for classical Ayurvedists possessing the qualifications of Ayurvedavisarada or its equivalent a short course of comparative medicine on lines similar to the post graduate courses of the school of Indian Medicine, Madras and will open it in June, 1932.

Gentlemen, I thank you once more and request you all to bear with us in this noble cause of Ayurvedic research of this central institution in our place, of which every one of us must feel proud.

PRESIDENTIAL REMARKS.

Widing up the proceedings to a close, the president said,
Dear and Respected Brothers,

Every one of us in the country all along yearned for the revival of Ayurveda and the leaders set to its renaissance, but, as the learned Principal said, they limited themselves to the Amantraka Ayurveda of Charaka and later books and consequently all the labour was misdirected and proved futile. It is as true now as in the times of Ayurveda *pradurbhava* that one should possess the maximum fitness to be fully inspired into the mystery of science of Ayurveda and as a reward of ripened Yogabhyasā and sustained deeksha, the very sources of Ayurveda placed themselves before this master-mind. The devas no doubt are always with and around us and perennially radiate real intelligence as the radio, but our *sthoola* being too thick to receive, read and record the impulses, we have shut ourselves away from the communion. It was only to sensitize our brains to receive the

subtle impulses from the Karana plane of the Devas, we are asked to observe strict Brahmacharya. Again to develop a special faculty one should develop a corresponding convolution or a group of convolutions in the brain, through a specific asana and Yogic practice. Then as a result of Perfection or Siddhi of the yoga, the particular faculty will bump up or get accentuated and a new Odic energy of the "Animadi Ashtaka" will flow out with the help of which one can penetrate into the mystery. To such a lucky individual, the Ahi-Devata superintending the faculty manifests itself "Pratyaksham" and presents the vision of inspirations which is called in the folk-language "Vara Prasadam". It is in this way only that every invention, discovery, and revelation has come out.

The Devas have no sthoola, even a sookshma sarira, and cannot communicate with us except through a human agency and for so doing they come upon an individual and possess him for induction or "Avahana." They wait for a fitting occasion and when a proper man is got they make him their earthly agent. The yogi, who has thus merited this happy communion with the Devas, obtains a real vision of a scientific truth and it is but true that the old Hindu Sages were "Veda Drashtas" or Seers of science.

For a man of the world, yogabhyas is next to impossible, but the doctor, being originally a Vedist and having inherited the Yogic practices is singularly lucky. Research again demands wholehearted application of purpose and willing sacrifice. In this case, the doctor gave himself and his large lucrative practice up to this pursuit for a number of years and the results placed before us deserve a very high tribute not only from this educated assembly but also from the whole world.

The Andhra country proudly acknowledged this central institute of research. The Andhra University having pledged to the vernacularization of Sciences must be really grateful for the Telugu Text books in Ayurveda and all its allied sciences which the doctor assures me he would willingly lend. I also urge on the Andhra University the immediate necessity for methodical research into the science of Oriental medicine and open the faculty of Ayurveda with a research laboratory directed by this master-mind.

In the meanwhile, I exhort this assembly to bear with the selfless work of the principal and enlarge his library and laboratory in order to advance further research and bring out text books on post-graduate subjects also.

All the gods be with this master-mind and shower on mankind their intelligence through his "Nishkama karma", their agency. Then, with the song of the Lord this function being concluded let us now disperse only to meet again and again to enjoy coming revelations.

Medical News & Notes

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THE GROUNDNUT INDUSTRY.

An interesting description of Kano, "where the groundnuts come from," is given by Mr. F. G. Wallach, general manager for Northern Area, Nigeria, the United Africa Co., Ltd., in *Progress*, the magazine of Lever Bros., Ltd. Mr. Wallach says, in the course of his article, "As a raw material of industry, the groundnut ranks among the most valuable sources of edible oil. It yields in oil, in fact, 49 per cent, of its content. Into the modern manufacture of margarine it enters notably; in a lesser degree it also serves the manufacture of soap; and after it has been converted into these everyday products, the residue left from the oil presses is turned into an excellent cattle food. Truly, a useful servant of civilisation.....Less than twenty years ago no groundnuts were exported from Kano. Nobody conceived that the trade in Northern Nigeria would develop to its present dimensions. It was the railway that helped to bring it about.....And the railway is now able to handle efficiently and expeditiously a crop of one hundred and fifty thousand tons during the season. The development of the groundnut trade to its present volume is due, apart from the railway, to the facts that Kano Province is very thickly populated, the native farmers are most industrious, the town natives are exceedingly keen traders, and there is any amount of cheap animal transport, which, to this day, more than holds its own against the invasion of motor vehicles. The Hausa trader—he is generally a Mohammedan and can lay claim to a thousand-year-old civilisation—is the possessor of a peaceful and contented temperament, and the agrarian population fully appreciates the benefits it has derived from the protection of the British Government. The farmer can work far away from the towns without fear of raids, and can transfer his produce to the trading centres unmolested.

"An extension of the railway from Kano to N'Guru is opening up a new and vast trading area in the Bornu Province. Apart from the certainty of increased supplies of groundnuts and hides and skins in the future, gum arabic of first class quality is obtainable in large quantities, and it is thought that in time Bornu will rival the Sudan as a source of supply of this valuable commodity."

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Random thoughts about diet

BY

DR. B. GANGULY, M.B.,

COUNCILLOR, CALCUTTA CORPORATION ;

EDITOR, "*Swasthya*."

Nations that live upon vegetable diet and, in particular, upon rice, as do the majority of Hindus and Chinese, are of a peace-loving nature.

Nations living principally upon vegetables are less prone to engage in war-like enterprises. They like quiet and peace.

It is because of this that a comparatively small number of meat-eating Britishers and Dutchmen have mastered millions of rice-eating Hindus and Malaysians and a few Belgians were able to subjugate the millions of inhabitants of Congo, who live upon starchy flour made from manioc and other similar roots and upon millet, batates and bananas, all of them poor in Albumin.

Nations living principally upon rice and other foods equally poor in Nitrogen have untiring capacity for work. They are much less nervous than the meat-eaters.

Foods containing sufficient Albumin are essential for school-going boys and girls.

The amount of lime contained in the food is of the greatest importance in keeping the teeth in good condition—specially during the period of growth.

Secretion of saliva is greatly stimulated by chewing and this is not only beneficial for teeth but for the throat as well.

The best fattening food is plenty of milk with cream, meat and carbohydrates, plenty of eggs, sugar and cream. Raisins, currants and dried banana may be added with advantage. Vegetable diet is best suited for a nervous, restless person and for a quiet mental worker.

It is an undisputed fact that vegetarians are always ahead in any athletic feats, where success depends upon power of endurance.

In bodily exertions, where great strength is required (lifting heavy weights, etc.); Albumin is necessary, as such feats require the building of muscles.

A lion can jump over a hedge with an ox in its mouth but cannot carry it far. An ox would not be able to accomplish the feat but it will carry a bigger weight for a longer distance.

Taking oranges and cherries to quench thirst is the most rational mode while on long journeys, cycling, rowing, climbing, etc.

It is the quality and not the quantity of food that matters.

Perfect health can be enjoyed upon very little food.

The best way to cook food is the cooking of food on a slow small fire not exceeding 100° C. It will be better digested, for it will contain valuable ferments. The vitamins will also have been retained. These will promote health and vitality. Inordinate cooking, and overboiling the food is unquestionably dangerous to public health and detrimental to public economies because it wastes foodstuffs and fuels.

Saliva act as an antiseptic upon may injurious substances which are taken into the mouth without food. Dogs lick their wounds and get cured.

Overindulgence in tea and coffee may cause untoward effects on the system.

Tobacco in particular has very injurious action upon the walls of the blood-vessels, and a great many cases of arteriosclerosis are due to its use.

When animal is fed on meat the hæmoglobin contents of blood is increased ; on the other hand Voil and Bischoff found that by placing carnivorous animals on bread diet their blood was rendered more watery.

When we want to activate the growth of the children, we must give them food containing plenty of Nitrogen.

Albumin is absolutely indispensable for our nutrition as our most important fluids, blood, lymph, digestive-fluids, etc., contain a large amount of it.

For an adult, too great an amount of Albumin is certainly not indicated, since it greatly increases the process of metabolism.

Human body can get along with very little Protein food daily provided the diet contains a sufficient amount of Lipoid (fatty bodies) and specially the Vitamins.

Thorough mastication is a prime necessity with starchy foods.

It should be the foremost duty of every Government to see that the people get fresh, wholesome and not denatured food. If it spends many millions on this purpose, we shall need much fewer millions for the maintenance of hospitals, lunatic asylums and jails.

Give more nourishing food to the young and growing organism. This leads to long and useful life.

One does not live by what one eats but by what one digests.

More are killed by gluttony than by the sword.

Original Articles

MIDWIFERY IN ANCIENT INDIA

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.

Calcutta.

XI.

APPENDIX II.

BIRTH CUSTOMS.

"The Treatment at Child-birth. Sasthi system.—"

The treatment of women and children at child-birth in Bengal Bihar and Orissa is generally regulated by the Sasthi system, which is so called because the worship of Sasthi, the tutelary goddess of young children and of women at child-birth, is an essential feature in it.

The expectant mother is taken to a lying-in room (Sutika ghar) shortly before delivery. The character of the room depends on the means and enlightenment of the family, but generally it is one of the worst rooms in the house, or a shed is erected outside in the compound. Among the poorer classes, the woman's accommodation is wretched. A portion of one of the living rooms may be screened off, or she may have to use the verandah; some doctors even state that the cowshed or kitchen is occasionally used. As a rule, when a separate room is assigned, it is small, dark and ill-ventilated. Bad as the ventilation would naturally be, the perfusion of air is often absolutely impossible owing to windows and apertures being closed with mud or stuffed with rags; this is done in order to prevent the mother and child catching cold, or because of a superstitious belief that it is necessary to keep out evil spirits. The outside shed, moreover, is often damp, and no attempt is made to admit the sunshine. Among the better castes, the mother is regarded as impure, after giving birth to a child, for 30 days, if it is a girl, and 21 days if it is a boy, and among some of the lower castes for 6 or 12 days. It would therefore be out of the question to furnish the room, and

her bedding is poor and meagre. She generally has some straw or an old torn mat to lie on, though sometimes a charpoy or taktaposh is allowed. A quilt made of dirty old rags serves as a coverlet, while her head rests on a dirty pillow or even a brick. However hot the weather, a fire is kept burning in the room day and night for at least five and, sometimes, as long as 21 days. The belief is that, unless the room is kept at a high temperature, the child will be an invalid or liable to catch cold all his or her life, while the mother will get pneumonia or typhoid. The more ignorant believe that the fire has magic power to save mother and child from the influence of evil spirits. Sometimes, however, the child is suffocated by the acrid fumes: all the same, its death is put down to malevolent demons. For the first five days at least, the mother is at the mercy of a low-caste midwife, who is called *Agani* in some parts of Bengal, as it is her duty to keep up the fire (*agni*). No male may enter the room and the women of her family may not touch her: if they do, they have to be purified by a bath before resuming their household duties. No doctor can attend on her because of her impure state—this of course is not the case with the educated classes. In Orissa, should it be necessary to seek medical advice, a drop or two of oil that the young mother has touched is put into water, and the *Kabiraj* or doctor makes his diagnosis from the way it floats and prescribes accordingly.

Heat is believed to be necessary for a speedy recovery. In addition to the warmth of the fire, the mother and child have hot dry fomentations, and the child after being rubbed with mustard oil is laid out in the sun for hours at a time: this is believed in some places to strengthen the cranial bones. Cold drinks are prohibited, as it is thought that they may bring on suppuration of the womb. Water is either not given at all or very sparingly for the first few days: in any case it is warm or tepid. To keep up her strength, the mother is given a concoction, of which the main ingredients are hot spices, such as pepper and ginger, and warm *Ohi*; when she can digest solid food, she eats fried rice (*chura*) and fried garlic.

On the fifth or sixth day the woman and child have a bath and she is sometimes allowed to change her room. In any case the lying-in room is cleaned—not too soon, as in many parts the ashes of the fire are allowed to remain as they are till this day, while the sweepings of the floor and the dirty foul-smelling

clothes are kept in a corner. The practice in this respect is not uniform, for the room is very often carefully cleaned soon after delivery. In Midnapur, it is reported that, after a child is born, the mother has to pass her hands and feet over some burning straw: the ashes of the straw, her soiled clothes and other refuse, a comb with a few strands of her hair, and a little turmeric, which has been rubbed on her left arm, are put into a pot, which is kept in a corner of the room and serves as a receptacle for refuse till this day. (This is not a universal practice: in some household the pot is thrown away at once).

The sixth day is a very important one, as it is the day of the worship of Sasthi, which means "the goddess of the sixth". In the evening, a representation of the goddess is made with cowdung (or in some places, of earth), in which some cowries are stuck. This is placed on the wall of the lying-in room, with a pot of water and some mango-leaves before it, and worshipped by the family. On the night of this day, it is believed, the Creator writes the destiny of the child on its forehead in indelible characters. An inkpot and pen are therefore placed ready for use at the door of the room. The antiquity of the practice is evident from the fact that an iron stylus and palm-leaves are frequently provided. When the sixth day is over, there is rejoicing, as the first six days are a critical period for tetanus—that common cause of death among infants, the umbilical cord being generally cut with dirty instruments (*e.g.*, a split bamboo or a conch-shell) and cowdung ashes applied to the freshly-cut end. It is believed to be caused by evil spirits, who are specially apt to attack both mother and child during her confinement. To protect them, various devices are adopted:

The skull of a cow smeared with vermilion, with cowries stuck in the sockets of the eyes and, in some places, with a red rag across the horns, is frequently, but not invariably, placed on the outside wall of the room to drive them away. Iron is also commonly employed to ward off their attacks. In some places, an iron sickle or sword is placed under the mother's bed, or a sword, spear or other iron weapon is stuck up at the door, or several iron articles are hung up over it, *e.g.*, an iron spade, hoe, harrow and axe. Old shoes and bits of old net, or thorny twigs are also suspended over the door, and sometimes the father fires off a gun in the belief that the noise will scare away the evil spirits.

The ceremonies observed by Māithil Brahmins in the Sonthal Parganas have several peculiar features. As soon as a child is born, straight lines about five inches long are drawn on the walls of the room, five for a daughter and ten for a son. On the sixth day, milk is sprinkled upon the head of the mother and the new-born babe. This must be done by the sister-in-law of the woman : ethnologists may be able to account for the choice of the latter. In the evening, the worship of Sasthi takes place. A square is painted on the walls, in the centre of which is a figure of Sasthi. To this figure the family make obeisance, and a feast is held to which friends are invited. The figure remains on the wall for six months, after which it is washed out with cow's milk.

Krishna System of Hariloot.

Another method of treatment is known as the Krishna or Satya-narayan system, or as Hariloot. It is mostly followed by Vaishnava families, though not confined to them; e.g., it is resorted to when women have had still-births. It is a more rational method, and is accompanied by fewer restrictions about food and drink.

No fire is kept burning in the room ; no *Jhal* or concoctions of spices are administered. The woman is allowed cooling drinks, and given ordinary food. She is not regarded as unclean, and need not therefore be banished to an outhouse and left to the midwife's mercies, but is attended by women of the household during the period of her confinement. She and the child are also bathed in cold or tepid water soon after delivery. This system is so called, because the régime is determined by resignation to the will of God, and because Hari (Vishnu) is worshipped by the mother a few days after the birth of her child. She makes obeisance to the Tulsi plant, takes a little holy earth from the place where it grows, and presents sweetmeats to the God with prayer. Sweetmeats are also distributed to children. This system is rarely followed, but is gaining popularity among the more enlightened Bengalis.

Reincarnation in the same Family.

The Hindus believed that, when a man dies, his spirit hovers as a Preta in the sky for one year, during which it is provided with food and drink every month in what is called the Masika Sraddha. At the end of the year, another Sraddha is performed,

the effect of which is that the spirit joins the spirits of his ancestors in the Pitriloka, or heaven of the Pitris, and there becomes a participator in the Sraddha offerings, more particularly of the funeral cakes (Pinda). This belief precludes the idea that the spirits of the departed are reborn in the same family. If, however, an infant is born within one year of the death of a member of the family, it is generally thought that the spirit of the departed has come back. Sometimes also, if a child shows extraordinary precocity, he or she is regarded as a reincarnation of an ancestor. A correspondent informs me that a daughter of his, only four years old, when on the point of death, begged that she might be taken to the bank of the Ganges. Her last request was granted and she died on the riverside crying "Ma Ganga," "Ma Ganga". This knowledge of the Hindu religion by a child of such tender years was so extraordinary, that all the villagers were convinced that the spirit of the child was that of her grandmother, who had died ten years before.

There appears to be an express or implicit belief among some aboriginal tribes that souls return to animate human beings in the same family. It is a general belief among the Khonds that the souls of deceased persons (Pidari) return to animate human bodies, but such persons must have been married, or at least have had sexual intercourse, during their lifetime. The souls of unmarried persons cannot enter the circle of family spirits, but are malevolent spirits, causing fever, ague, apoplexy, etc. Those of married people animate the foetus as soon as it is fully formed. The souls of old people are believed to possess similar powers even before their death. It is also said that if an expectant mother sees one of the ancestors in her dreams, the foetus is then endued with life, and begins to move in the womb. The soul of a dead man may animate two or more persons at the same time or in different generations.

In a report by Captain MacPherson, dated the 10th July 1844, regarding the practice of female infanticide amongst the Khonds, it is stated—"The Khonds believe that souls almost invariably return to animate human forms in the families in which they have been first born and received. But the reception of the soul of an infant into a family is completed only on the performance of the ceremony of naming upon the seventh day after its birth. The death of a female infant, therefore, before that ceremonial of reception is believed to exclude its soul from

the circle of family spirits, diminishing by one the chance of future female births in the family. And, as the first aspiration of every Khond is to have male children, this belief is a powerful incentive to infanticide. Inquiry shows that there is no belief among the Khonds at the present time that the ceremony of receiving a child into the family on the seventh day after birth confers the privilege of re-entering the family at some future time. This power is acquired only when the child has become an adult and been married. The explanation is probably that, as it would be improper to destroy a child after it had been given a welcome in the family circle, it became the practice to destroy female children before the ceremony was performed.

Among the Chakmas and Maghs, when a child is born, its body is carefully examined to see if it has any red or black spot. If such a spot is found and it corresponds with the mark made with sandal wood paste on the dead body of a relation, it is thought that that relation has been reincarnate in the child. Further, if a dead man appears in a dream, and a son is born shortly afterwards, he is considered to be a reincarnation of the dead man. The Gonds also believe that a man can be born again in his family. His soul is brought back to the house on the fifth day after death.

His relations go to the side of a river or stream and call him by name, after which they catch a fish or an insect and take it home. There they either place it in a room reserved for the spirits of dead ancestors or eat it in the belief that the dead man will again be born in the family.

The practice of naming children after ancestors also seems to point to a belief in the conservation of spirits in the same family. This is clearly expressed in the ceremony attending the naming of children among the Khonds. A Guru is called on the seventh day after its birth to discover by divination which of the ancestors has animated the new-born child. To make sure that the Guru has made no mistake, the child is placed on a new piece of cloth after having been bathed and fed. Should it fall asleep, it is a sign that the correct name has been discovered.

If there has been a mistake, the ancestral spirit will show its disapproval by keeping the child awake and causing it to cry; the Guru is thereupon required to make another attempt at divination. The Santhals also name their children after

ancestors. The eldest son takes the name of his paternal grandfather, a second son that of his maternal grandfather, a third son that of the paternal grandfather's brother, the fourth son that of the maternal grandfather's brother, etc. A similar custom is observed in the case of girls, the names of relations on the female side being taken in the same order. Among the Bhuiyas the name of the grandfather is given to the eldest son, that of the great-grandfather to the second son, and then the names of collateral relatives according to seniority. A similar custom of naming children after ancestors prevails among the Hos, who have a method of divination like that of the Khonds to ascertain which name should be given. They repeat the name of the ancestors in turn and as each is mentioned, drop a grain of pulse (Urid) in water; if the grain sinks it shows that the proper name has been selected, if it floats, they go on till the right name is found.

The Hos have no idea of reincarnation, though it is believed that the spirits of the dead return to the house. Seven days after death the spirit is solemnly recalled. Ashes are spread on the floor of the house and four women sit at the corners, while the family and their guests sit near the door outside and invoke the spirit. Two go out and call to the *Bongas* or evil spirits, praying that if any have taken the deceased, they will allow him to come back. The house is kept dark, and suddenly the women cry out "The spirit has come". They then light a lamp and look for the marks the spirit has left on the ashes. Some spirits leave the footprints of birds, some of snakes, others of cats, others of dogs. These footmarks show whether the spirit is happy or not. The greatest happiness is indicated by the footprints of birds, then of cats and then of dogs. The mark of a snake, however, shows that the spirit is in great misery. After this, the spirit is supposed to remain in an invisible form in the house, and a space is set aside for him in the inner room (*adina*), which no one but members of the family may enter.

Naming of Children.

Among Hindus every child has generally two names. One is the ordinary name by which the child is known to the outside world. The other is the Rashi name, *i. e.*, a name containing the first letter of the *rashi* or sign (division of the zodiac) under which the child was born. This name, which is given at the

Annaprāsana ceremony about six months after birth, is known only to the nearest relations and is used only in religious ceremonies. It is sedulously kept secret from the public on account of a superstitious belief that mischief can be done to the child through it. Many also have a third name, which is only used in the family or among relations and friends. The *rashi* name is frequently chosen by a species of divination. Two or more names are written out and each is placed before a lamp; the name before the lamp that burns brightest is chosen. The upper classes frequently name children after gods or goddesses and mythological heroes, the idea being that the children will be protected by the deities, or will grow up to be great or famous like the heroes or heroines whose names they bear. There is also an idea that virtue is acquired by mentioning the name of a god or goddess in addressing a child. Now-a-days such names are not so frequently given, but melodious or poetical names are chosen instead, e.g., Jyothsna (moonshine) for a girl.

Among the low castes, names are selected more or less at random. A child may be named after the day of the week on which it was born, e.g., Sombari (born on Monday), or the name may mark some physical peculiarity, or it may even be the designation of some common article.

Among the Bhuiyas of the Orissa States the name of the grandfather is generally given to the eldest son, that of the great grandfather to the second son, and then the names of collateral relatives according to seniority; but it is not unusual to give a name that commemorates some incident or event that happened on the day of the child's birth. Thus, if the child is born on the anniversary of a festival, he may be called after it, e.g., as Dashara. If a European happens to pass through the village on the day of the child's birth, the child will be named Saheb or Gora (white man), while, if it is visited by a Musalman, a dealer, a peon or a constable, the child's name will be Pathan, Mahajan, Chaprasi or Sipahi (sepoy) as the case may be.

If women have failed to bear children before, or if their children have been still-born or have died shortly after birth, opprobrious names are given in the belief that this will avert the evil eye or fail to attract the god of death. Such names as Tinkauri and Panchakauri are supposed to mean that the child is worth not more than three or five cowries. Similar names are Sachunni (the broomstick), Kangalia (the poor), Haran (the lost

one) and the like. A boy needing special divine protection is often named Haribola. Superstitious parents will not disclose the names to outsiders and use such terms as Megher Bap (father of Megh), Tukir Ma (mother of Tuki), etc. In Orissa there are often fictitious sales of children in order to save them from a premature death. The parents sell them at small price to women belonging to such low castes as Dhoba, Hari, Dom or Ghasi, and repurchase them at a higher price. There is an actual, though momentary, transfer, for the children are handed over to the low caste woman, who gives them back to the parents after anointing them with turmeric powder mixed with water and oil. Similar sham sales are effected at the shrines of gods and goddesses, the priests in this case being the buyers. Among the middle and low classes, children are named after the caste of the women to whom they are sold, so that a boy may be called Dhobai, Hari, Pan, Ghasia or Dom, and a girl Dhobani, Hariani, etc. Such names are often given too by parents without any fictitious sale. The belief underlying these transactions is that the parents have committed some sin which can only be expiated by the death of the child and that the low caste woman takes the place of the parents and acts as a scapegoat.

Deaths in Pregnancy.

If a pregnant woman dies before delivery, her womb is ripped open and the foetus extracted. This gruesome task is performed by the husband himself at the burning ghat. The *raison d'être* of the practice is said to be the hope of saving the life of the unborn child, but as it is postponed till the body is about to be cremated, this hope must be rarely, if ever, fulfilled. It is noticeable too that the foetus is buried while the woman is burnt, and it is probable that the origin of the practice was to prevent the woman becoming an evil spirit and injuring the family. The Bhuiyas of the Orissa States burn the embryo and the corpse on opposite banks of a stream, the idea being that as no spirit can cross a stream, the mother is unable to become a witch without union with her child. In all other cases the Bhuiyas bury their dead. When a pregnant Oraon woman dies her ankles are broken and her feet wrenched backward to prevent her spirit walking; a bundle of thorns and a heavy stone are also placed over her grave to prevent the spirit getting out.

Rites of Pregnancy.

As is well known, it is the duty of Hindus to observe twelve purificatory rites, called *Sanskaras*, beginning with conception and ending with marriage, which are intended to purify a man from the taint transmitted through his parents. Three of these are rites of pregnancy, viz., *Garbhadhan*, *Punsavan* and *Simantonnayan*. *Garbhadhan* is a ceremony which should be observed at the first appearance of the menses and be followed by cohabitation.

It is intended to consecrate impregnation, the idea being, as stated by Monier Williams, that a husband, before approaching his wife, should secure the solemn imprimatur of religion on an act which may lead to the introduction of another human being into the world. This ceremony is now rarely observed except by the thoroughly orthodox. Even those families who recognize it as obligatory consider that their duty is discharged by a symbolical performance, a gold ring being passed under the bride's clothes. *Punsavan* is a ceremony which should be observed three months after conception, and before the period of quickening, with the object of securing male offspring. *Homa* is performed, the sacred fire being kindled and libation made of ghee, rice, plantains, etc. The husband touches the navel of his wife with a piece of gold and utters certain *Mantras* at the dictation of a priest, by which the blessings of the Gods of fire, water, and air are invoked. This ceremony also is almost obsolete. *Simantonnayan* is a ceremony designed for the purification of the womb and the unborn child, which may be observed in the 4th, 6th or 8th month of pregnancy. The main feature of the ceremony is that the husband parts the hair of the head of his wife with certain articles sanctified according to the Vedic rites. This is done only in the case of a first pregnancy, and has fallen into disuse except in very orthodox families.

Certain other rites which are not *Sanskaras* are observed far more commonly. The first of these is *Panchamritā*, which takes place in the fifth month. A mixture is made of five *amritas*, viz., milk, curd, ghee, sugar and honey, which are purified with *mantras* by the priest and given to the pregnant woman to drink in order that the child may be born with a pure spirit and a healthy constitution. Female friends and neighbours are invited to be present, and are given a feast. In Eastern Bengal a similar

ceremony, called *Saptamrita*, is held in the seventh month, and sometimes also in the ninth month, when it is called *Nabamrita*.

A woman who is expecting her first child is also given a series of entertainments in order that she may keep up her spirits and her child may have a happy disposition. The first of these is called *Kancha Sadh* ; *sadh* means the desire or craving of a pregnant woman. It takes place in the fifth month when the fact of pregnancy is clear. She is given various articles of food to eat, such as sweetmeats, fruits, etc., on an auspicious day ; there is general rejoicing in the family circle, and a feast is held to which friends are invited. From the seventh month till delivery, more entertainments are given which are called *Pakka Sadh*, or *Sadh-bhakshan*. The nearest female relatives are expected to entertain her in turn and present her with a new *sari*. She has to put this on before eating, and is given various dainties to eat. Children are invited to sit with her and to help her in doing justice to the good fare. A little boy (never a girl) first of all hands her a morsel of food in order that she may give birth to a male child. The object of these entertainments is to keep her bright and cheerful : incidentally she secures a good stock of *Saries*, a new one being given to her on each occasion.

Causation and Determination of Sex.

The desire of Hindu parents is naturally to have male children, and there are various beliefs regarding the measures necessary to obtain male offspring. The general idea is that the male element must be able to prevail over the female element, in other words, that there must be an abundance of semen. It is also believed that the male principle is strong on even and the female on odd days : consequently, intercourse on even days (from the 4th to the 16th day after the commencement of menstruation) will produce a male child, and on odd days a female child. Various devices are adopted in order to ascertain the sex of the child before birth.

Sometimes a *ganak* or astrologer fortells it by drawing figures with a piece of chalk ; to make his calculations, he must know the numbers of letters in the names of the wife and husband, and the month in which the pregnancy commenced. Another common method of divination is as follows. A stone pestle and an earthen plate or lamp are covered with two cane baskets. A small boy is asked to uncover one of the two. If the basket,

over the pestle is taken off, it is believed the child will be a male; otherwise, it will be a girl. Occasionally offerings are made under a banyan tree on the day before the *Simantonnayan* ceremony, and the husband takes a leaf of the tree. The edge of this is steeped in the juice of a plant called *Kantikari* and held to the nose of the wife. If she sneezes, it is believed there is a male child in the womb and, if not, a female child. There are also, of course, ideas, which are common to women in many countries, that the sex of the child can be known from the position of the womb and the colour of the nipples, that if the expectant mother looks dark and thin during her pregnancy, the child will be a male, etc. Some women also think that if conception takes place in the bright half of the lunar month, it will result in the birth of a male child, and, if it occurs in the dark half, the birth of a female."

Census of India. 1911, Vol. V. Part I. Report. P. 328.

AYURVEDIC THERAPEUTICS OR THE SCIENCE OF RASA, VEERYA VIPAKA AND PRABRAVA

BY

VAIDYABHUSAN PURUSHOTTAMSHASTRI HIRLEKAR,
AMRAOTI

*and translated from his Marathi compilation by Ayurveda-
charya Pandurang Hari Deshpande, Poona.*

(Continued from our last issue)

APPENDIX II.

PROPERTIES : SNIGDHA, ROOKSHA, ETC., AND
THEIR SWAROOPAM.

While describing the properties of substances, a mention has been made, in the texts, of properties such as Snigdha, Rooksha, etc. While describing the action of a substance either producing or curing disease, it is also said that it is endowed with some such qualities as Snigdha, Sheeta, Rooksha, etc. The point in mentioning these is to show that the action of substances in different parts of the human body takes place on resorting to some of these qualities.

Ayurveda has divided all the substances of the human body, as also its physical actions into three : viz Vayu, Pitta and Kapha, and these three Doshas are so to say a combination of some of the properties heading with Snigdha, Rooksha, etc., and though by general and far-fetched meaning all the actions of substances are due to these Doshas, there is really a difference in them according to the real qualities of the particular Dosha. While treating the Dosha, therefore, such properties of substances should be caught hold of as would be effective on those particular qualities of the Dosha. Such properties of a substance are really indicative of its specially effective power. Out of the disorders said to be taking place from one of the three Doshas, some are from one of its qualities and some from the other. Many disorders have been said to be taking place from the Kapha Dosha. But some of them are due to its Snigdha quality, while some are from its Sheetata quality, while there are also some coming from its qualities such as Guruta, Mriduta, etc. While prescribing, therefore, a medicine against Kapha Dosha, sometimes it must be seen that it contains Rookshata as against Kapha's Snigdhata or sometimes Ushnata against its Sheetata, etc. This is why particular properties of this minute description are required to give full consideration.

Shunthi (Zinziber officinale), *Pippali* (Piper longum), *Maricha* (Piper Nigrum), *Kantakari* (Solanum xanthocarpum), *Atarusha* (Aghatoda Vasica), *Vansharochana* (Extract of Bambusa arundinacea) etc, are some of the medicines indicated in Kapha. But their actions upon the Kapha disorders are each different. Shunthi, Pippali and Maricha are Ushna, but the first two are Snigdha while the last one is not so. Kantakari, Atarusha and Vansharochana are sheetata and rooksha but Vansharochana is more rooksha and Kantakari is teekshna while Atarusha is the more so, as also it possesses the *Stambhana* property which Kantakari has not got.

Having due regard to such variation in the properties of the above-mentioned medicines, Shunthi, Maricha and Pippali will be more useful in such disorders as sleepiness, obesity, dyspæsia, etc., of which sheetata is the main cause. Kantakari will be effective in Asthma, Cough and Rheumatism. Atarusha will be specially indicated in Asthma and Cough originating from the disorders of Kapha and Pitta as also in Scurvy, *Urahkshata* (patches in the lungs), tuberculosis, etc. Vansharochana will be really a curative medicine of the type of Cough which is originated from

the excess of Kapha. (More noteworthy properties of Vansharochana, however, are different).

Following are the twenty qualities described in Ayurveda :—

(1) Sheeta, (2) Ushna, (3) Snigdha, (4) Rooksha, (5) Guru, (6) Laghu, (7) Manda, (8) Teekshna, (9) Mridu, (10) Kathina, (11) Sthira, (12) Chala, (13) Sandra, (14) Drava, (15) Sookshma, (16) Sthoola, (17) Vishada, (18) Picchhila, (19) Shlakshna, and (20) Khara.

THE FORMS AND ACTIONS OF THESE TWENTY QUALITIES.

<i>Quality</i>	<i>Form</i>	<i>Action</i>
Sheeta	Cold to touch	To produce coldness in the body
Ushna	Hot to touch	To produce hotness in the body
Snigdha	Wet and smooth	„ effect accumulation and (thereby) productivity and growth
Rooksha	Dry with want of smoothness	„ produce dreariness (rookshata) and (thereby) separation.
Guru	Heavy in weight	„ Cause heaviness.
Laghu	Light in weight	„ Cause lightness.
Manda	Mild	Appeasing.
Teekshna	Severe	Irritating.
Shlakshna	Smooth	Not pricking to the physical substances (or not to cause substances to prick each other).
Khara	Rough	To cause the physical substances to prick each other.
Kathina	Hard	„ bring hardness to the Dhatus.
Mridu	Soft	„ bring softness to the Dhatus.
Sthira	Steady	„ bring steadiness
Chala	Moveable	„ bring moveability
Sandra	Thick	„ bring solidity
Drava	Liquid	„ bring liquidity

<i>Quality</i>	<i>Form</i>	<i>Action</i>
Sookshma	Minute	To create vacuum
Sthoola	Broad	„ lessen vacuum
Vishada	Clean	„ create cleanliness
Avila	Soil	„ create dirtiness

Among all these twenty qualities only two are prominent—Sheeta and Ushna, other eighteen forming part of them, as each of these, hot and cold, has nine subclasses of its own, viz., Sheeta (cold), Snigdha (greezy), Guru (heavy), Manda (mild), Shlakshna (smooth), Mridu (soft), Sthira (steady), Sandra (thick), Sthoola (broad) and Avila (soiled) being one whole class, while Ushna (hot), Rooksha (dreary), Laghu (light), Teekshna (severe), Khara (rough), Kathina (hard), Chala (moveable), Drava (liquid), Sookshma (minute) and Vishada (clean) form the other whole. Sheeta and Ushna are independent and prominent and the rest are dependent and seem to show their forms relatively.

It must now be clearly understood to get a full idea of the properties of Sheeta and Ushna that the former is an agent of union while the latter of separation. Sheeta, being the agent of union, unites together all the particles. This unity is Snigdhata. Sheetata tends to unite while Snigdhata happens to exit in the complete form of unity. In this united state many particles are collected together and so Guruta and Sthirata and Mandata quite naturally follow. So also Sandrata (meaning solidity) is indicative of the united state. Avilata happens to be in the state of Sandrata. Sthoolata is the very form of unity. The clear meaning of Sheetata is then unification. This unification takes place in the *parthiva* particles, as the very resort (origin) of all the substances is (३३) only. In the *parthiva* particles, the property of attractiveness naturally appears. But among such particles, union is possible then alone when, by combination of one into the other, there is oneness. For this combination, the principle of *Ap* (Water) is required to be combined into that of *Prithvi* (Earth) and to get oneness amongst the particles, their original form must be changed and they must be turned into a liquid state. Before this liquid state, though there is unity, it is only of the type of closeness; it is not oneness and so there cannot be liquidity in them but rather solidity. When particles are closely united together, there is no vacuum—etherial space left in between them. In these particles, which are placed in a state without

vacuum and in the same level, smoothness takes place which is called Shlakshnata and when Ardrata (wetness) is added, Snigdhatata comes off, which, when proportionately increased, brings about Mriduta. This is really the state of Shithilata. Dravata is then nothing but a perfect state of this Shithilata.

In this way, Sheetata and its nine sub-qualities are depicted. Now the ten in the Ushna group shall receive consideration.

The main quality in this group—Ushnata—is chiefly the agent of or producer of *Vijojita* (separation). The quality which follows the state of separation is really Rookshata. This Rookshata means the readiness of particles to part from each other and so in this sieve-like state of the particles, the qualities Laghuta and Asthirata take place. In the state of unsteadiness and the point of being separated, Sthoolata goes off and Dravata happens to take place. In the actual state of separation, the particles are separated from each other, Sthoolata goes off and Sookshmata comes there. Swachhata then naturally follows. Mriduta, that is possible in the close union of particles, goes off and kharata comes off, and by this roughness, softness is removed and a sort of hardness is brought about.

“A sort of hardness” is said because, though there is hardness in the closely united particles, when these particles are actually united together, it cannot be without some Ardrata, as without even the smallest degree of wetness, unity is but impossible. Without having Ardrata, the natural individuality of particles does not go off so as to bring about oneness. So the hardness of united particles is always with wetness; even though in the smallest degree, while now in the contrary state of this, where there is no unity, no smoothness, and no liquidity, even in the very dry particles,—a sort of hardness is just possible and the same is referred to above.

The hotness that acts as an agent of separation, when increased to a great extent is called Teekshnata and the same tends to separate the particles very severely. This is quite a contrary quality of mildness which is found in the state of Sthirata and Snigdhatata.

In this way is described the other class of qualities headed by Ushnata.

The regular working of the physical Dhatus, viz., the production of their particles and their growth, takes place when such various particles happen to unite; in the same way their wasting and death take place when such particles disunite from each other. It is, therefore, that such unions and disunions, which bring about

productions and destructions respectively, are important and consequently the properties, Sheeta and Ushna, which respectively bring them about, are considered to be most important. The twenty qualities above-noted showing the relative and specially active parts are subclasses of these two, Ushna and Sheeta.

When the digestive power in the physical Dhatus itself is diminished, and lackness of nutritious substances takes place, Dhatus begin to waste away. In this state, digestive and nutritious substances are indicated. *Pippali* (*Piper longum*). *Lashuna* (*Allium sativum*), *Adiraka*, *Louha* (Iron, Mercury, Sulphur, pearls, *Pravala*, etc. contain such properties.

When in the state of wasting, Dhatus are soiled with Ama dirt, and the substances curing them must be digestive, stimulant and purifying. The Dasha Moolas (roots of ten herbs headed *Aegle marmelos*), *Ginger* (*Zinziber officinale*), *Gudoochi* (*Tinospora cordifolia*), *Kirita* (*Swertia chirata*), etc. are medicines containing these properties.

When in the wasting condition Ushnata is in more degree, tonic medicines diminishing this hotness but not causing cold (which is very possible in such a weakened state) are required and *Yashti madhu* (*Glycirriza glabra*), *Musta* (*Cyperus scariosus*), *Extract of Gudoochi* (*Gudoochi Satvam*), *Pravalam*, *Pearls*, etc. serve this purpose.

When, however, wasted Dhatus are very clean and have neither hotness nor coldness increased, but dryness and dreariness increased in them, medicines which are neither ushna nor sheeta and not increasing snigdhatta but only diminishing the rookshata and kharata from the former are required. The actual state is this that the dried particles of the Dhatus having been bereft of their juiciness do not supply them the nutritious liquid and because of this dryness and roughness Dhatus dash against each other and cause trouble to each other. Here such medicines must be indicated which by their smoothness will cause evenness and growth in them. The quality of smoothness is required in such a state. *Vanshalochanam* (Extract of *Bambusa Arundinacea*), *Gairika* (Red earth), extract of *Gudoochi* etc. are endowed with such properties.

In the treatment of any disease, these subclasses of qualities, according as *Doshas* and their *Dooshyas* (Dhatus and Malas) are disordered, must be taken into consideration.

The affection by one disease to different people at different occasions is seen of different types and the reason of this difference

is that the abode of the disease and the particular Dhatu is affected by different qualities. The treatment here, if required to be successful, should be directed by taking into consideration this difference.

In fevers, generally stimulant, digestive and diaphoretic medicines are necessary, as the Pitta (bile) in the Pachyamanashaya (Small Intestines) ceases to be in its own abode, but goes elsewhere, and the ducts carrying sweat are contracted. Bile having gone up from its usual place, being the reason of heat in fevers, medicines to be indicated in them must contain properties that will pacify Pitta. This has, therefore, been laid down as a rule in the treatment of fevers :—

ऊष्मा पित्तादृते नास्ति ज्वरो नास्त्युष्मणा विना ।

तस्मात्पित्तविरुद्धानि त्यजेत्पित्ताधिकेऽधिकम् ॥

It is, therefore, that medicines in fevers are digestive, stimulant, diaphoretic and those appeasing the Pitta. These are really the qualities of the combination of hot, cold and soft qualities existing in the combination of tikta and madhura rasas, and so generally in fevers Musta (*Cyperus scariosus*), Parpata (*Fumeria parvifolia*), Shathi (*Curcuma zedoaria*), Gudoochi (*Tinospora cordifolia*) etc. are found to be very effective. But every time and in different cases some difference is seen in the types of fevers. In intensive fevers, where the quality Teekshnata is increased (called the Pittaja or Pittadhika Jwara), soft and pacifying qualities are required and so along with the above medicines, Dhanyaka (*Coriandrum sativum*), Nimba (*Azadirachta Indica*), Chandana (*Santalum album*), Valaka (*Andropogon Muricatus*) etc. are used effectively. If, however, this severity and consequent intensiveness of fever is relatively less, but there is rather Snigdhata in the defective Pitta and consequently Guruta and Sheetata are increased, along with the common antipyretics, medicines of Ushna, Teekshna, Rooksha and Laghu qualities (which qualities are found in the Tikta and Katu rasas) should be used and so in this type of fever (called Kaphadhika Jwara), Ginger (*Shunthi zinziber officinale*), Pippali (*Piper longum*), Ataroosha (*Aghatoda Vasica*), Kantakari (*Solanum xanthocarpum*), Katuki (*Celsia coromandeliana*), Dhanvyasa (*Fagonia Arabica*), the root of the long pepper, Maricha (*Piper Nigrum*), etc. are indicated. And if there is rather Rookshata in the defective bile, producing fever, (called Vataja Jwara), grapes (*Vitis vinifera*), Yastimadhu, Gokshura (*Tribulus terrestris*), Shaliparni (*Desmodium*

Gangeticum), Prishniparni (*Uraria Picta*), Bala (*Sida cordifolia*) etc. are medicines containing Snigdhata which should be indicated.

The difference in the qualities of substances and their relation to the combination of Rasas and Anurasas must be taken into consideration before arriving at their properties for certain.

PROPERTIES OF MEDICINES.

Having taken into consideration the principles which are described in the present compilation, if one goes to read the properties of substances described in Ayurvedic texts, one must know that such properties are described after having first described the Rasa, Anurasa, Vipaka, Veerya and Prabhava of them. He, however, cannot find there which of the properties relate to Rasa, Veerya, Vipaka and Prabhava separately. So also it is not clearly stated there which of the properties are general and which are special, and so they cannot be understood in their proper sense. One is, therefore, required to decide the relative value of these properties after having considered the theory of Rasa, Veerya, Vipaka and Prabhava. This relative view is all the more necessary when they are put into practice especially in a particular disease. Unless it is clearly ascertained which of the actions of a particular medicine affect the whole body and which its particular part, medicines cannot be efficaciously brought into use in treatment.

When a certain disease takes place in a part of the body, that particular part is more affected than the others and so the disease-producing causes act powerfully there alone. Even when Dhatus, such as blood and others in the whole body are affected, and a disease appears on a particular part, it is clearly inferred that that particular part is more weakened and is more affected. There are, however, some substances which, without affecting the whole body, or rather keeping it quite healthy, act vigorously on a particular part. So then it is clear that particular diseases take place on particular parts of the body by a particular local disorder and so medicines indicated in such particular diseases must contain the power of acting specifically on such particular parts. Medicines containing such power are to be considered as specific medicines. In diagnosis, it is important to know accurately the part of the body affected and in treatment importance is given to the knowledge of the specific action of a medicine on that particular part. In diagnosis, *Sthanasanshraya* of the Doshas, being the (direct) cause of a disease, is important to be noted for the knowledge of

the particular part affected and in therapeutics Prabhava of a medicine is given importance as it tells upon what particular part of the human body it is going to act.

Every disease has two stages, one the first stage in the form of causes, Prognosis—and the second, the regular stage of the disease—Diagnosis, in which the disease appears in its full form. In the first stage, though the disease-producing cause has appeared in the whole body, for want of a favourable soil in a particular part, it is latent, but becomes apparent on some part where it finds a favourable field. As long as such a favourable field is not found, the disease will never appear. But such a cause is of that type that will appear in the form of a disease on any part it finds favourable. The favourable field for the cause of the disease is the weakness of the diseased part and, therefore, in the treatment of any disease, such diseased part and its disorder are required to be taken into consideration. In some diseases, when the cause of the disease has appeared in a particular part, it is extinguished from all parts of the body, but in others it exists in the whole body even after it has appeared in a particular part. These stages, of course, depend upon the power and proportion of the poison of the disease. But whatever may be the stage, the disease having shown its appearance on a particular part, it must be treated particularly locally.

The treatment is also told to be two fold in Ayurveda. In the stage when causes of a disease exist in the whole body, the treatment is given to extinguish them in that stage, and in the abode of the disease where these causes make appearance, the treatment is given to cure that form of acting on that particular part. These are termed in Ayurveda as *Hetupratyanika* and *Vyadhipratyanika* respectively. The former acts generally on the causes in the whole body while the latter particularly on the part affected. The action of the *Hetupratyanika* treatment is through the Veerya of a drug while that of the *Vyadhipratyanika* treatment is due to its Prabhava. It is, therefore, that Prabhava of a drug is given great importance and its consideration must be given due attention to. Prabhava is the particular action of a drug on a particular part of the body.

In treatment, this sort of Prabhavi drug is really considered as the specific remedy. It is not that a general medicine does not act on a disease, but it acts only generally, not specifically. In every part of the human body a particular kind of liveliness happens

to be existing and owing to this liveliness the lively actions of the part are going on. The particular action of a drug on this part, owing to homogeneity, is called Prabhava and so the same is very important.

In therapeutical works, as said above, no classification is seen as to such and such properties are due to the Veerya of a drug and such are due to its Prabhava. But having told the Veerya and its effect on the Doshas, the uses of the drug are indicated in certain diseases and its object is clearly to show that that drug acts particularly on such diseases. Otherwise there was no necessity of indicating that drug on such diseases after having said that it diminishes such and such a Dosha (disorder) without which no disease makes appearance.

Still in such works treatment on the Prognosis-causes is mixed with that of the disease-treatment, and it then becomes difficult to differentiate from the properties mentioned therein the general treatment from the particular. It is, therefore, that the therapeutical science or the theory of these properties is required to be resorted to. The present compilation is meant to consider the same.

I. Properties of substances experienced from their Rasas and the difference perceived by the Anurasas.

2. Properties changed by Vipaka as also those specially due to Vipaka.

3. General properties from Veerya and the general effect upon diseases.

4. Powerful properties (due to Prabhava) and their speciality or otherwise.

In this way properties of substances are to be clearly described. For this description, if possible, the order will be as Rasa, Anurasa, Vipaka, Veerya and Prabhava. But this order cannot be observed everywhere. Because while describing the properties, those of the Rasa and Anurasa combined, as also difference in the properties from Veerya due to this combination are interdependent and so while describing one, the other will naturally intervene, but the same will help to easily understand their relations with each other. Redundance is, of course, not advisable for retaining the order.

(To be continued).

FIGHTING THE FATIGUE POISONS

A NEW METHOD OF REJUVENATION

BY

DR. HELAN JAWORSKI.

(The distinguished Paris Physician in an Interview.)

To rejuvenate man or woman it is necessary only to introduce a few drops of blood taken from a younger person.

In my youth I was an ardent student. To understand the science of medicine I considered it necessary to study botany, zoology, anthropology and biology. Thus through the combination of facts that I gathered, pieced together and compared, I discovered a principle that throughout Europe is now described as 'Interiorisation'.

'Interiorisation,' roughly speaking, is a process in the human body that is something akin to the crystallisation that takes place in over-strained steel. It means, briefly, the hoarding of fatigue poisons in the blood.

As we get older, we hoard more and more 'toxins' or poisons, and it is these that constitute the reason for most of the changes that take place in the human being past his prime.

WHY TREES ARE LONGER LIVED

A tree, which hoards no poisons, demonstrates the principle of 'Exteriorisation', and a comparison showing how much longer-lived are trees than men proves the necessity of forcing man to 'exteriorise'. This fact I knew years ago. But the difficulty lay in finding a method whereby the fatigue poisons in man might be fought.

Rejuvenation, to my mind, is a term that is rather absurd, because it suggests an idea far removed from true scientific aim or accomplishment. The scientist is not interested so much in making a human body youthful as healthy, and that the terms 'youth' and 'health' have become synonymous is due only to the fact that young people, as a class, have hoarded fewer fatigue poisons than those who have lived longer. However, since the term seems to please, I will continue to call my discovery a 'rejuvenation treatment'.

By working ceaselessly, and experiment upon animals, I learned that the injection of a few drops of blood from a healthy young person—preferably of opposite sex—would produce in human beings 'Exteriorisation' or the throwing-off of fatigue poisons.

The principle is simplicity itself, but of course the actual practice of the method is rather more complicated, for it involves blood tests, and the blood of the donor must not only be perfectly healthy, but must be suited to that of the patient. In addition, should the patient suffer from any organic disease, the treatment, although it may improve conditions slightly, is valueless from the aspect of restoring lost vigour.

I have not yet proved to my satisfaction the reason for this, although I judge it to be due to the fact that the poisons thrown into the blood of a sick person are too powerful to allow the new blood to produce the effect that it has on ordinary, though aged, blood.

I do not consider that my treatment is likely to prolong life.

But—and this is more important to most people than longevity—it will preserve youthful vitality for the natural span of life.

It will not allow of general deterioration. It will prevent both men and women becoming aged and infirm through hoarded toxins.

I wonder how many people realise that Man represents in separate portions of his own complicated body the almost complete organism and functions of a number of animals !

MAN—AN AMALGAMATED ANIMAL KINGDOM

It is not easy to explain, but I will put it as simply as I can. The lungs, for example, represent in themselves practically the whole organism and functioning of birds, the intestines are practically perfect reptiles, the hands in a general way act as do crabs and the myriad creatures of the ocean that are similar, and so on.

In a phrase, Man is the incorporation of the entire animal kingdom—the amalgamation of it !

And the cure for most diseases lies in serums prepared from the animal that resembles the organ affected. Thus, from birds, I have been able to evolve a serum that cures many respiratory troubles, such as asthma, hay-fever, pneumonia and so on. For

further confirmation, I cite the success of anti-toxin in the treatment of diphtheria.

Unfortunately our limitations in knowledge prevent us from understanding clearly some of the functions both of the organs of Man and of his relation to beasts. Therefore, we have not yet got very far. But scientists all over the world are working to obtain more accurate information and in time, little by little, we shall utilise our similarity to animals to our own advantage.

I believe that Man evolved from the same life-cells that produced all other forms of life—in a sentence, that such different creatures, let us say, as the kangaroo and the bird evolved from one type of cell and that conditions alone were responsible for the divergent type of growth that each achieved. A further division took place when Man was evolved. But this new creature, Man, continued to function as had the other forms of life, simply carrying on the processes of his animal brothers and sisters, combining these within himself!

However, that is only the underlying principle upon which my rejuvenation treatment has been built. And now let us see what rejuvenation really means.

First let us look at it from the point of view of efficiency. At present elderly people often find it difficult to work with the nerve and speed which they put into their work in their earlier years, and this is attributed vaguely to 'age'. Of course it is not age. Age means very little. It is the accumulation of the toxins in the blood that is slowing them down. The brain in an elderly body is not being fed on the pure food that once it received.

GETTING RID OF THE TOXINS

A treatment which rids the blood of that accumulation restores, automatically, the lost powers, mental and physical.

Next let us look at it from the point of view of human happiness, which after all, perhaps, matters most. It is generally agreed that a deterioration in good looks acts adversely upon men, but its effect upon women is disastrous. There is a general loss of self-confidence, an equally general and overwhelming loss of serenity that is not only tragic for the woman her-self, but eventually reacts unfavourably upon all who come into contact with her.

In addition it is true that many happy marriages and many successful careers are wrecked because a woman's appearance

is no longer attractive. In a number of cases, to throw off fatigue poisons is more than restoring the human body to its maximum efficiency—it is the prevention of a broken heart and a wrecked life !

Of course, when I speak of a few drops of blood, I do not mean that the blood itself is injected. It is a carefully prepared serum taken from the few drops that the donor gives. Since I began my work, certain doctors, in treating various diseases, have found it useful to take some of the patient's own blood and inject it, which causes a curious kind of shock which is sometimes extremely beneficial.

In my own treatment, there is no shock, and consequently no danger. The only risk that a patient could run would arise if the doctor were sufficiently careless to fail to make proper tests and assure himself that the donor's blood and that of the patient were perfectly suited.

The method of performing the treatment is so simple that any medical man can give it. The technique is not a secret any more than the principle. And this, I believe, concludes all that I can say about it.

(Hindu—Weekly.)

Reports of Societies, etc.

—:o:—

DISARMAMENT BEGINS AT HOME

How they did it in B.C.

BY GEORGE ROBEY

(*The world-famous Comedian.*)

"When there is not a flat-iron, a knuckle duster, a cosh, a beer bottle, an onion or a sneeze left in the world, then I shall begin to believe that we are serious about disarmament."

Disarmament ! What does it mean, anyhow ? I have just been discussing it with a friend, and he became so enthusiastic about it, that he offered to fight me ! That is just the trouble about disarmament. A scrap of paper brought us into the Great War. I shouldn't be surprised if a passion for disarmament didn't bring us into the next War, just to prove that we were right.

My idea is this. If the world really wants to disarm, it must begin at home. Charity begins at home, which means to say you feed your own children before you worry about the man who is singing in the street. Disarmament should follow suit. You should throw away your flat irons,

your saucepans and other heavy artillery. If you are in favour of abolishing gas warfare, you must make up your minds never to eat onions again. If you don't believe in attacking civilians with bacteriological bombs, you must not sneeze in tubes and buses.

When there is not a flat-iron, a knuckle duster, a cosh, a beer bottle, an onion or a sneeze left in the world, then I shall begin to believe that we are serious about disarmament. Meanwhile I pay eleven shillings in the pound for income-tax, and I am looking forward to paying the whole twenty shillings in the pound, when I shall dye my hair, forge a birth certificate and see the world in the R. A. F. Meanwhile I like to see something for my eleven shillings, and I like to see some soldiers, some battleships and some tanks, just to be sure that all my money is not being spent on red tape at two pence a yard.

BUT WHAT'S THE GOOD OF IT ?

Britain has disarmed as far as her professional fighters are concerned, and can point to herself as a good example. I haven't noticed any falling off in the consumption of flat irons and onions, but perhaps that will follow. But what is the good of turning our tanks into tractors, our battleships into ashtrays and our mustard gas into eau-de Cologne, if the inclination to fight remains in any other part of the world? Our ashtrays wouldn't be much use if the Rajah of Bhong became bored and started beating up our nationals! True, we could send him a bottle of eau-de Cologne, but personally I would prefer to go armed with a gun. I haven't the slightest doubt that if we, literally, disarmed, some people would still go on fighting, and unless you cut off their knuckles and drew their teeth, I don't know how you would stop them.

But, say the disarmament enthusiasts, the League would have a police force which would beat up the Rajah if he was wrong. True, perhaps, but if you see your neighbour's dog chasing your chickens do you call a policeman or do you heave a brick at it? Probably by the time you reached to worthy Rajah with your international police, there wouldn't be any of your nationals left to argue about. Every nation has paid lip service to this great idea and I wish I could pay my income-tax in the same way. But they all stick to Cromwell's motto. "Put your faith in God, but keep your powder dry."

I believe in brotherly love but there are just one or two men I can't see as my brothers. It's the same with nations. They all say, "Oh, yes, the rest of the world is all right, but those—over the border are just—," only they say it in diplomatic notes, which make every goose seem a swan.

I remember talking to a border Scot some time ago. He told me how tough he was and what a tough race he came from. "Well," I

replied, "You've got to be tough, living between two different peoples. If you weren't tough, you wouldn't be there."

CHAPS WHO DON'T GIVE YOU ANY PEACE

You may think that I'm pretty blood-thirsty, but actually I'm as peace-loving as the man who accidentally treads on my toes. The trouble is that there are a lot of fellows who don't give you any peace—the chaps you owe money, and the chaps who owe you money, the neighbour who says your cat steals his chickens and the man who wants to sell you an insurance.

Of course you can settle your differences in court. The court probably awards one of you damages and the other costs, so that you are all square, and can fight it out round the corner without prejudice. The difference between fighting and going to law is that, win or lose in law, you continue to hate the other man, but after a good scrap you shake hands and think he isn't such a bad sort after all. What is true of individuals is true of nations. You always find the nations that have just been fighting each other, lining up together for the next scrap.

ANOTHER SPARTA AND ANOTHER — !

I think the King of Sparta knew more about real disarmament than all our experts to-day. He didn't worry about civilian objectives, categories, calibres and so on, but he knew that so long as he kept his men tough, no one would trouble to fight them. All his youngsters were licked every day of their lives. If they didn't like the lickings, they weren't good Spartans, and died. The youngsters who went in for stealing were encouraged, but given a good beating if they were found out at it. The result was they became very good foragers and didn't need "lines of communication" in time of war. Their line of communication led straight from a plate to a mouth. It was easily maintained.

We are just beginning to learn that the old King of Sparta knew which side his papyrus was buttered. If there had been a League, the King would have asked "What are the members leagued against?" and when they told him "War," he would have replied, "Well, go ahead, I'm not fighting". If an international incident occurred—a Spartan citizen help up at the Appolopigus frontier because his tie wasn't straight or something like that—then the King would have given the frontier police such a talking to that next time they would let through a Spartan without a tie at all. He would have kept such good order that no one else would have bothered to arm.

What we want to-day is another Sparta to keep the rest of the world in order. Now that suggests that another Helen would also be required. Well, I wouldn't mind. Anyway, it is the best way to prevent wars.

Hindu.

Medical News & Notes

—:o:—

The summer vacation exodus is in full swing and thousands are flocking to the hills in search of relaxation and pleasure.

Many vacations, however, are doomed to end unhappily through illness and accident, and physicians will be called upon to treat innumerable traumatic injuries of the muscles, tendon sheaths, bursae and synovial structures about the joints; sprains, abrasions, lacerations, dermatitis caused by poisonous plants, sunburn, etc.

In these cases physicians will find Antiphlogistine one of the most useful and efficient all-round dressings.

In addition to its antiseptic, analgesic and osmotic qualities, Antiphlogistine by stimulating the flow of blood to the parts, favors the absorption of infiltrations, exudations and adhesions.

Injuries resulting in blood and fluid in the various synovial sacs are particularly responsive to Antiphlogistine; and the associated oedema and stiffness of a joint, following fracture, are usually much relieved.

Physicians are invited to write to the Denver Chemical Mfg. Co., 163 Varick Street, New York, for sample and literature.

ALL INDIA AYURVEDA VIDYAPITH EXAMINATION RESULT.

1932.

This year 77, 302 and 405 (total 784) Ayurvedic students sent in their applications for the Acharya, Visharada and Bhishak Examinations respectively. Among the 77 applicants of Acharya, four could not get permission to appear. Seven were absent. Out of the remaining 66, only 6 passed in third class. The Visharada had 302 applicants. Out of these 29 did not present themselves. Out of the remaining 273, only 33 students passed in the third class. In the last session, the Vidyapith had passed the following resolution:—'Students who pass the Vidyapith Examinations in parts will not be given the First or the Second Class. All the Acharya and Visharada examinees having passed in parts stand in the third class. The Bhishak Examination had 405 applications: but 25 students were absent. Out of the remaining 380, only 102 passed, four in the First, 17 in the second and 81 in the third class.

One extra-ordinary thing about this year's examinations is noteworthy. The Bellary Central Jail authorities, in pursuance of a G. O. No. 511 M. S. dated 4-2-31 Law and General Department, very kindly granted permission to the political convict No. 2429 C-Clas, an Ayurvedacharya examinee of ours to appear for his examination in the jail itself under their direct supervision.

The Jail Superintendent moreover accepted to act as a Centre Superintendent of ours. We sent question papers, the examination programme and blank answer books for the above mentioned examinee to the superintendent and he gave the examinee the question papers at proper date and time, got the answer books written by him within the prescribed period and sent them to us well packed in registered parcels. The examinee has finished his remaining subjects and has come off as an Ayurvedacharya of our Vidyapith this year.

I am thankful to the Central Jail Superintendent, Bellary, nay, to the Superintendent of our special centre namely "Bellary Central Jail" for the pains he took for our Vidyapith.

The names, centres and classes of the successful students are given below.

Poona 2. } Secretary,
9th June, 1932. } ALL INDIA AYURVEDA VIDYAPITH.

ALL INDIA AYURVEDA MAHAMANDAL VIDYAPITH, POONA CITY.

List of successful students.

1932.

AYURVEDACHARYA.

Centre.	Roll No.	Name	Class.
Delhi	27	Vaishya Haridatta Thakoredatta	III.
Bankipore	37	Sukharamdas Babu Vindheshwari	"
Bezwada	45	Snistla Subrahmanya Venkatramayya Garu	"
Lucknow	59	Dwivedi Chandrashekhar Ramacharansbatri	"
Rishikeah	65	Angirasa Haridwarilal Gaud Shamalal	"
Bellary C. Jail	76	Hudumba Doddyacharya Narasimhacharya	"

VISHARADA.

Karachi	42	Slapande Dwarikaprassad Shivadaya	"
Cawnpore	57	Agnihotri Kanaulja Rajaram	"
"	59	Awasthi Rupanarayan Sukawilal	"
"	69	Jayachandra Kaundeya Manikyachandraji	"
"	93	Pandeya Kripashanker Mannulal	"
"	106	Mishra Shyambihari Vrajajalishastri	"
Gwalior	134	Chaturvedi Umadatta Dhanapatirai	"
Delhi	141	Gaud Pyarelalsharma Tejaramsharma	"
"	144	Joshi Ramdeo Sharma Sagarmalji	"
Prayag	157	Tripathi Shivaprasad Vrajamohan	"
Bankipore	173	Tripathi Govind Shrinarayan	"

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Centre.	Roll No.	Name.	Class.
Bezwada	210	Bulusu Subrahmanyashastri Sitaramshastri	III
"	213	Mulugu Kumaraswami Subrahmanya	"
Muttra	220	Chaturvedi Chakrapanisharma Zuparam	"
"	221	Brahman Purnanandsharma Giridharilal	"
Lucknow	247	Goswami Salonevalabha Kamalvalabha	"
"	250	Tripathi Ramachandra Rajakumar	"
"	251	Tripathi Ramalal Rameshwarprasad	"
"	252	Dixit Triveniprasad Ramanrayan	"
"	259	Mishra Ramachandra Vedanathmishra	"
"	260	Mishra Ramanihal Ramalochana Mishra	"
"	261	Mishra Shobharam Chandrikaprasad Mishra	"
"	265	Shukla Shyamasunderlal Ramavilas	"
Rishikesh	275	Gaud Suryadattasharma Parashuramsharma	"
"	276	Chauhan Suratsimh Devisimh	"
"	277	Gaud Kshemanand Badridattasharma	"
"	282	Dwivedi Tularam Vedaramsharma	"
"	285	Pandeya Krishnanandsharma Bachiramsharma	"
"	286	Pandeya Krishnanandsharma Jayadattasharma	"
"	288	Bilwopal Balkrishnasharma Bachiramsharma	"
"	290	Nishra Girishachandrasharma Kanayalalsharma	"
"	298	Sanadhya Bhudeosharma Premarajsharma	"
"	302	Somopal Lokamanisharma Dharmanandsharma	"

AYURVEDA BHISHAK.

Ajmer	6	Dwivedi Tularam Vedaramsharma	II
Amraoti	15	Borik Vasudeo Govindrao	"
"	16	Shete Mahadeo Narayan	III
Ahmedabad	17	Kulaguru Shantilal Mohanlal	"
"	18	Joshi Dasharathlal Ramakrishna	"
"	20	Joshi Shankerprasad Jadhavarai	"
"	23	Dawe Somanath Harishanker	"
"	25	Dwivedi Ambashanker Umiyashanker	II
"	29	Pandit Radhavalbha Shyamalal	III
"	30	Pandya Bhudhrabhai Motiram	"
"	32	Pandya Somanath Maneklal	"
"	35	Mukharaiya Durgaprasadsharma	"
"		Sadashivsharma	II
"	36	Mehata Anirudha Maneklal	"
"	39	Limchiys Anubhai Khodidas	III
"	40	Vaidya Ambalal Narasiram	"
"	42	Vaidya Purushottam Waman	"
"	47	Shukla Shivashanker Pranashanker	II

<i>Centre.</i>	<i>Roll No.</i>	<i>Name.</i>	<i>Class.</i>
Ahmedabad	48	Shukla Harajivan Narayan	III
Indore	59	Digambarjain Anantram Luxmichandra	I
"	62	Parashara Matiprasad Pyarela	III
"	67	Bhandari Triambak Pandharinath	"
"	70	Vyas Vidyadhersharma Raghunathaji	"
Karachi	78	Joshi Fulachand Bherilal	"
"	79	Dwivedi Kripashanker Ramabihari	"
"	81	Dwivedi Mohanlal Harilal	I
"	82	Paniya Pralhadraisharma Batumlalji	II
"	84	Vyas Kanailal Jaganathaji	III
"	85	Shukla Bhuwaneshwar Ramachandra	"
Calcutta	91	Mishra Matasharan Ramatawakal	II
Cawnpore	101	Jain Mulachand Gabdumal	III
"	106	Shukla Zamanlal Dularelal	"
Colombo	108	K. K. Krishnam	"
"	109	K. Padmanabham Kocham	II
"	111	Parara K. C.	III
"	112	Poruthil Madhayan Karu Vaidyar	"
"	118	Simhalis A. B. Gunavardhane	"
"	119	Senadhar J. G.	"
Gawalior	120	Upamanyu Gurudayalsharma Madanmohanlal	"
"	121	Dwivedi Biharilal Ramadayausharma	"
"	124	Bhatnagar Anandilal Santkumar	"
"	125	Bharadwaj Mathuraprasad Dewiprasadsharma	"
"	126	Yati Ramaratnasharma Chainsukhaji	"
"	127	Shukla Vidyadher Muralidher	"
Jubbulpore	130	Kharpadiya Chandrashekher Ratiram	"
"	131	Khare Radhikaprasad Mannulal	"
Delhi	143	Gaud Shaligramsharma Mutsadilal	"
"	146	Brahman Nivarnjanlalsharma Ramchandra	"
"	152	Sanadhya Somadatta Shankerlal	"
Poona	153	Khekalo Ramachandra Ganesh	II
"	154	Chitnis Waman Ramachandra	III
"	157	Bal Shridher Parashuram	"
Prayag	159	Tripathi Kapildeosharma Kedarnath	"
"	162	Brahman Gunasevak Bhagirath Shukla	II
"	164	Mishra Krishnanand Tularam	III
"	166	Mishra Sadhusharan Nageshwarprasad	"
"	167	Briguvanshi Rajanathasimh Jangabahadursimh	II
Bombay	175	Kanitker Dinker Keshav	I
Bankipore	198	Tripathi Yajneshwer Banke	III
Bezwada	214	Abbaraju Jagannashrao Venkataramayya	"

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<i>Centre.</i>	<i>Roll No.</i>	<i>Name.</i>	<i>Class.</i>
Bezwada	219	Kodali Ramatulashishwarrao Kondayya	III
"	221	Khandvalli Sitaramacharya Venkatachary	"
"	227	Dhulipala Sitaramayya Laxminarayan Garu	"
"	231	Nori Venkateshwershastri Ramashastri Garu	"
"	239	Modiraju Adinarayan Kottaya	"
"	240	Mudumba Varadarajacharyulu	"
"	247	Surabhiramsharma Kannayya Garu	"
Muttra	255	Dewiprasad Ramanivasaji	"
"	258	Bhagawatiprasad Ramasahayjisharma	"
"	260	Mishra Sarayuprasad Prabhudayalsharma	"
Madras	269	Natarajan P. R.	"
"	272	Marutwa C. K. Sanjivi Pandit	"
Rajahmundry	277	Kokirigadda Kameshwarrao	II
"	278	Chitti Suryanarayan Appalanarsimh	III
Lucknow	290	Gaud Shamdattasharma Khupachand	"
"	296	Bais Chatrapalsimh Thakore Ragunandansimh	"
"	297	Mishra Vasudeolal Vishwesther	"
"	298	Mishra Radhadewi Rikdiu Mishra	"
"	300	Ramasharansharma Govindprasad	"
"	302	Wajapeyi Vaijanath Madhavaprasad	II
"	305	Saksena Rameshachandra Hariprasdji	III
Shimoga	319	P. Y. Kalu Nambiyar	5
"	320	Bhat Pandurang Wasudeo	"
Rishikesh	323	Arya Balveersimhlala Govindprasadji	"
"	324	Audichya Sahasre Trishachandrasharma Prabhudayalji	I
"	327	Gaud Dattaramsharma Baladeoprasad	II
"	328	Gaud Dewiprasadsharma Bhiksharamsharma	III
"	330	Gaud Baburamsharma Ramaswarupasharma	"
"	338	Chauhan Balavantsimh Mulasimhsharma	II
"	341	Jotirvid Buddhiwalabha Hariwalabha	"
"	357	Mishra Parashuramsharma Santlalji	III
"	359	Muralilalsharma Kanayalalsharma	"
"	370	Shukla Dhanashanker Prabhashanker	"
"	371	Sanadhya Ramasharansharma Shivasahaya	"
"	373	Saini Raghuwirsimhsarma Dilipsimh	"
"	375	Joshi Roshannalal Mukundram	"
"	343	Dwiwedi Ishwariprasad Shriram Sharma	"
Sub-centre			
Nellore	378	Iska Ankyya Nalyya	"
"	379	Iska Rangayya Garattayya	"
"	391	Mahankali Adinarayanaya	"

Centre.	Roll No.	Name.	Class.
Nellore	392	Vanduri Sitaramsimh	III
Nandyala	400	Karnam Hanumantrao Krishnarao	"
"	402	Tambi Tirumallaya Ramanujayya	"

VEGETARIANISM AND HEALTH.

By C. R. JAIN.

The question of the relation of food to health is being properly studied now-a-days by the leading medical authorities in the west.

Dr. Bircher-Benner of Germany is one of those who have evidently bestowed much care and consideration on the subject. I am giving some valuable extracts here from his book, "Food Science for All" for the benefit of those interested in the question in India.

Dr. Bircher-Benner has discovered the fact that plants represent condensed sun-light, which is very essential for our health, and says with reference to it :

"The meaning of this discovery will be at once evident to you when you hear that it is as much as to say : for human nourishment, fruits, nuts, and raw salad have the highest value, foods of animal origin have the lowest value. (Food Science for All, pp. 66).

On page 58, he tells us :

"Neither with flesh, nor with poultry, nor eggs, nor caviare, not even with cow's milk, can one strengthen the weak, much less cure the sick. So many thousands have already had dearly to expiate such ignorant experiments ; they have paid for them with early death or with long illness. The excessive proteids in the food are not only a bad source of energy...their breaking down in assimilation grievously overloads the organs, as any chemist familiar with the facts can tell you."

Again on pp. 99 and the following pages he explains :

"Here one will be tempted to think that there are also other nutrition units of animal origin, such as, eggs and milk. The hen's egg also is a complete synthesis of food material for the first period of growth of a living being. But try to feed a human being on hen's egg alone, or even with a diet in which hen's eggs form the chief constituent, this person will soon fall ill. The digestive organs will refuse to act, the kidneys will excrete albumen, and will presently become inflamed. And if you do not soon abandon your experiment, the grave injury to his organism will cost him his life. Why ? Because the wisdom of life designed the food material of the egg only for the life-stage of the embryo chicken, characterised by certain conditions, for a stage of most rapid growth without motion. For milk, Bunge has proved this special and

careful design of nature. He has shown that the composition of the milk of the various species of mammals, in particular the albumen content, stands in a certain relation to the rate of growth of the particular suckling. Moreover milk, as you already know, lacks iron, which the new-born animal brings with it into the world in quantity sufficient to last for the nursing period. Hence a person whom you try to nourish on milk alone or even mostly, *e. g.* on milk and white bread, will also sicken, will suffer from ever-increasing poverty of the blood, waste away and soon die. The injuries which arise through the policy of boiling milk, through the destruction of the vitamins, so that in the most extreme cases Barlow's disease results. All this I have not taken into account. But what I wish you to notice with regard to milk is the dependence of this food upon the source from which the mother gets its food. Milk has different nutritive results according as the cow is fed on green fodder or dry fodder. With green fodder nutrition is better, for simply by drying the grass the nature of the original nutritive energy is degraded. The vitamins are said to be diminished.

"But what are the vitamins? Something intangible, something that exists, that acts, and yet something that no one has been able to find. They are the still unknown substances! For example 200 grams of dried yolk of egg were extracted with 400 cubic centimetres of water, and the water evaporated off. The water-soluble vitamins should now be present in the 4.5 grams of dry residue. The chemical analysis of this dry residue showed nothing but inorganic salts. At first, then, these inorganic salts had been contained in the yolk in a fine, regulated state of division mixed with all the other material. And we know that their molecules were there in another, an excited state, in exact proportion with the captured solar spectrum. Precisely herein lay the glory, the wealth of colour of the nourishing principle. Hence we are justified in asking: are these vainly sought, still unknown substances, perhaps spectral proportions of excited molecular states? Is it for this reason that they are undiscoverable by chemical analysis? According to all that I know of the matter, this seems to me the most probable. This much is certain that the excited states of the molecules, either of themselves or at slightest impulse, give up the energy quanta and pass again into the stable permanent states of the neutral molecules, thereby losing their specific nutritive action. In this way the sensitiveness and the ready destructibility of the vitamins would be explained without difficulty.

"And with the help of this conception of the vitamins the relation of animal to vegetable food would be more readily understood. Since the so-called vitamins originate only in the vegetable kingdom, and yet are contained in cod-liver oil, milk and eggs, animal products, it will be seen that animal life is able to preserve, accumulate and use for its purposes

the excited molecular states, so that in milk, in the egg, and stored in the liver and other organs, at least when living, they are always present in their original vegetable values, though mixed in the organs with other substances which as regards nutrition act rather as ballast. But from this it becomes comprehensible that milk, eggs and animal organs also possess nutritive value, and that beasts of prey, which swallow their victims alive and with the blood, can flourish on pure animal food.

"But things became quite different when the animal is slaughtered, the blood removed, and when the cellular tissue and organs have passed through the *rigor mortis* and the boiling, roasting, smoking, or salting process. The well-known exothermic energy processes—pardon me if for the sake of brevity I do not explain these processes more particularly (see *Grundlagen der Ernährungstherapie*, Foundations of nutrition therapy)—which here come into play, show that energy is being lost, and where else can this expelled energy come from than from the most sensitive and at the same time for nutrition the most valuable energy—quanta—symphonies of the spectral nutrition energy formations? Therefore the nutritive value of the flesh preparations consumed by the human being is utterly deficient and inadequate. It is true that decomposable masses which moreover are mixed with characteristic stimulants are subjected to human assimilation, and a feverish activity is started in the organs of digestion and assimilation which gives an illusory feeling of strength; but this is only in small part nourishment, rather it is encumbrance and deception. If you feed a person on butcher's meat, fish and poultry only, he will succumb in a suprisingly short space of time to severe poisoning. I have somewhere read of Asiatic tribes who condemn their criminals to death by flesh. The condemned person receives either mutton only or veal only, and death is said to take place in 28 to 30 days.

"With vegetable foods, the case is altogether different. It is now proved that on a fruit and nut diet man can grow up, flourish, and perform full physical and mental work, enjoy splendid health. Whole nations, e.g. the Japanese, whose diet consists almost exclusively of vegetables, with unpolished rice as a basis, flourish and exhibit high physical, mental and moral virtues. In Japan, the man of the people—not forsooth the Europeanised Japanese physician—does not believe, as does the European, in the strength of flesh food. Accordingly the riksha-men, who had to run 25 miles a day, and whom Prof. Baelz of Tokio had offered meat for their extraordinary achievement, begged to be allowed to leave it, as it made them feel too tired and they could not run so well as before. From these facts we must conclude, whether we will or not, that the energy relations of fresh vegetables correspond with the requirements of the human organism to a far greater extent than do the best

animal foods such as milk and eggs; indeed that they alone completely meet the need.

"This result completely corresponds with my theory of the essential nature of chemical nutritive energy and its original identity with sunlight."

The explanation is continued on pages 109 and 110 where we have it:

"Involuntarily one's thoughts turn here to the words of the American investigator, Mc Collum, 'that diet is an essential, if not the most important factor for spiritual, moral, physical and cultural development and for resistance to diseases.'"

"By means of a heavy, dimly-lighted diet—rich in all the different kinds of flesh and stimulants—people not only invite diseases, they build within themselves barricades against the wisest and the most powerful friend of their life, against the spirit.

"These plant food-units contain everything which the human organism requires, and in the right proportions: enough of the various proteids, a wealth of the best energy givers, the carbohydrates, from which fats can at any time be formed in the organism, or the fats themselves; the minerals necessary for life (the nutritive salts) in the excited state and in the right proportion, and accordingly also the vitamins, or supplementary, or creative substances, which are arousing so much attention. No one therefore need wonder any longer that man can amply nourish himself, grow and keep well with these alone, that ox, horse, stag, roe, and even the elephant can build up their proteid rich bodies from grasses, herbs, leaves and blossoms. Not only the 96 per cent. of energy consumption in the maintenance of life but also the 4 per cent., the requirement for building up the body-substance, is entirely provided by these plant food-units. There is no reason to fear that their proteid-content will be insufficient. *They are a complete food.*

"It is true that in the animal economy also, the wisdom of life knows how to deal carefully with these nutritive values and to store them up in the animal body, so that the animal food substances and organs contain them and can serve man as food; but man does not consume the animal in the live state with skin, bones and bloods like the beasts of prey. He consumes parts of the animal after it is dead and after more or less elaboration by heat. Thus the original nutritive values suffer a not inconsiderable change. That the European attributes such a high value to 'proteid-rich' flesh food is one of fatal, fundamental errors.

"Eggs and cheese among other animal foods, cause over-acidity, and milk often loses its value through cooking and becomes even dangerous

through the wrong feeding of the cows or the disease of their mammary glands."

No doubt, vegetable foods also suffer deterioration in the processes of cooking, roasting and baking; but not to the same extent. Fruits and nuts and salads are actually eaten uncooked.

(To be continued.)

THE LEAGUE OF NATIONS AND THE DRUG TRAFFIC.

The eighth session of the Permanent Opium Board set up when the Geneva Opium Convention came into force in 1928, was held at Geneva in January. The duty of the Board is to examine statistics with regard to drug manufacture and consumption throughout the world.

In 1929, the Board reports, nearly twelve tons more morphine than the world required for legitimate purposes were manufactured and since esters of morphine were not at that time covered by the Geneva convention, the surplus production probably entered the illicit traffic in this form. The most important seizures reported to the Board in 1929 came from India, the United States, Egypt, Greece, and Kwantung, and there was an increase of sixty per cent. in the seizures of cocaine over the average for the previous four years. It is, however, impossible to calculate the dimensions of the illicit traffic from the amount of the goods seized, since, although both Customs and police authorities are more vigilant than ever, only a small proportion of the contraband trade is detected.

At the request of the Board, certain countries, including the Union of South Africa, have tightened up their laws relating to "dangerous drugs," whilst the United States of America is one of the countries which, although not a party to the Geneva Convention, has helped the Board by supplying full annual statistics. On the other hand, France and most of the Central and South American States have so far failed to provide the complete statistics required by the Convention. This is particularly serious in the cases of Bolivia and Peru, since these two countries are among the chief producing centres of cocoa leaves. It is hoped that more detailed figures will be forwarded for 1930.

The Board considers that it should be possible to calculate world's requirements in narcotic drugs, and one of the principal tasks of the League during the coming months will be the drafting for submission to a World Opium Conference next May, of a Convention to limit the manufacture of "dangerous drugs" to the amount estimated for medical and scientific needs.



